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ABSTRACT

The articles in this collection focus on new sources of energy for learning at the college level. The topics of the 25 articles include the following: (1) the emerging role of the learning specialist in higher education, (2) adult learning disabilities, (3) vocabulary development for students of English as a second language, (4) the efficacy of college reading and study programs, (5) test preparation strategies of college freshmen, (6) a program for transfer students with low grade point averages, (7) the effects of peer tutoring on academic achievement and affective adjustment, (8) using testing and self-assessment for better advising and placement, (9) the relationship between oral reading miscues and comprehension, (10) using linguistic principles to improve the reading comprehension of nonstandard dialect speakers, (11) text structure and critical reading, (12) planning and drafting requests for federal and private program funding, (13) neuropsychological screening at the college level, (14) a core reading and spelling vocabulary program for the secondary and college level student, (15) helping students cope with configurational teaching strategies, and (16) teaching writing as process in the writing lab. (HTH)

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PROCEEDINGS OF THE THIRTEENTH
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READING
LEARNING ASSISTANCE
DEVELOPMENTAL EDUCATION
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VOLUME XIII

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Theme:

The 1980's: New Sources of Energy for Learning

March 27-30, 1980

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PREFACE

Thirty-six papers which were presented at the Thirteenth Annual Conference of the Western College Reading Association in San Francisco were submitted for possible publication in this volume of the *Proceedings*. Of those, twenty-five manuscripts were selected by the six member editorial team. All papers were reviewed by at least three editorial advisors; many were read by five editors before any decision was made to accept or to not accept a paper. Contributions were edited also for punctuation, spelling, semantics, syntax and *Proceedings* editorial style.

Hopefully, the researcher and the practitioner will find both useful and delightful reading among the twenty-five quality papers included in this anthology which encompasses reading, learning assistance, developmental education and tutorial services.

Gwyn Enright
12/31/80

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FROM REMEDIATION TO REFORM: THE EMERGING ROLE OF THE LEARNING SPECIALIST IN HIGHER EDUCATION

John C. Ries

University of California Los Angeles

Higher education is struggling with new developments. Today's students are different. You've been aware of it for some time now. The students are different in their preparation, their expectations, and their capacity to use higher education for their own development and benefit. At the same time, higher education is opening its doors to new groups of students in a way that has never happened before. And these two developments, in my opinion, are the greatest opportunity and challenge in higher education since World War II.

It's important to remember the numbers we're talking about and the way they affect what's going on in our society. In the last census estimates I've seen, three-quarters of our eighteen-year-olds now complete high school. The percentage of white high school graduates that go on to college increased by one-third in the decade of the sixties, and has leveled off at about 25% of the high school graduates. During that same period, the percentage of black high school graduates that go on to college has doubled and now approximates that of white, 24%. And of course, older people in great numbers are returning to our campuses. And here in California, and probably in other states as well, there are many non-English-speaking immigrants turning to our system of higher education to give them access to occupational mobility. As a result, an increasing number of groups who have traditionally not participated widely in higher education are now doing so. All this results in much more heterogeneity in our student population.

Unfortunately, other trends are also taking place. And here I will limit my comments to UCLA because I don't have systematic national data. Our students are coming the university increasingly unprepared in basic verbal and mathematical skills. Furthermore, our attrition rates are climbing — they're bad and getting worse. In California the university has very restricted access; the community colleges have open access. We limit admission to the university to the top 12 1/4% of the high school graduating class. Yet the

overall attrition rate for freshmen at UCLA is 19%. And, in 40% of the cases, the attrition is for academic reasons. Unfortunately, it is not evenly distributed across ethnic groups. For Hispanic freshmen at UCLA, the attrition rate is 27%; for Blacks, it's 34%. Now I suspect these trends are widespread, probably nationwide. But we don't have good attrition data; do you know what the attrition rate is at your own campus? We didn't know at UCLA until very recently. I think perhaps it's something we should be more interested in. I do have one bit of additional evidence from the American Council on Education survey of all college freshmen, where freshmen in recent years were asked if they needed remedial preparation after arriving at college, and if so, in what areas. The response indicated that 12% needed remedial help in English, 5% in reading, 22% in mathematics, and 10% in science. You can decide on the basis of your own experience whether you think these estimates under-represent or over-state the case. But now that we are opening educational doors to more and more varied groups, increasing their access to the intellectual, emotional, and occupational opportunities that higher education represents, I wonder if we will be able to meet their needs, or if our door is a revolving door. I'm sure you wonder about this too.

What is higher education doing to meet the challenge presented by these changes in the needs and aspirations of our students? Unfortunately, it's difficult to answer that question since there are no systematic data available. We have limited information from the schools we are in touch with and know something about, but have no national studies. And I think that tells us something. However, I suspect that the response differs enormously from institution to institution. And, also that within institutions different units respond differently.

Let me again draw on my experience at UCLA, and you decide how typical or atypical our response has been. The faculty ignored the problem. To the extent that we—I am one of them—were aware of the problem, we blamed somebody else. Student services were aware of the problem; the human wreckage washed up at their doorsteps. Our psychological counseling services were aware of the problem; they were the first group at UCLA to see that there was real change in our students, and that we weren't responding to their needs. And that eventually led to establishing a Learning Skills Center at UCLA. Through the Economic Opportunity Program we began to develop support services that were more responsive to the needs of non-traditional students. But these activities were isolated, invisible, and slightly suspect academically. When the faculty finally started to respond, we acknowledged the need for remediation—we approved remedial courses in mathematics and in English composition. But then we denied the students credit for the courses, and even worse, we refused to teach them. We wanted somebody else to teach them. Similarly, we acknowledged the existence of the Learning Skills Center and the Economic Opportunity Program with the provision that they accepted the label "remedial," and stayed out of sight, and especially out of the curriculum. Actually, we used our Learning Skills Center

and the Economic Opportunity Program to avoid both reality and change. And I'll have to say they played the remedial game with us. You know the rules of the game. The problem is the students; the fault is theirs. We would allow remediation, especially if it meant that we did not have to change anything else. Higher education must be doing something right or it wouldn't have succeeded so well thus far. We're not sure what it was we were doing right, but whatever it was, it must not be changed. I suspect we've all played this game. I've played it.

But the problems didn't go away. Enrollments in the remedial courses at UCLA soared. They were among the most popular courses on campuses. The attrition rate also soared. Finally, the reality of the situation began to penetrate. A number of reasons can be cited for the problems, including the reason of numbers. As you know, white births dropped one-third between 1960 and 1979. Minority births stayed stable. So that meant that while the overall population in the 18 to 24 year old age cohort was declining, there was a marked shift in the ethnic distribution. Again, I don't have national data on this, but in Los Angeles County, which I think is a fairly typical urban example, the picture looks something like this: the number of high school graduates between 1976 and 1986 will decline by 16%. But the white population went from 50% of the school population to 30%. The Hispanic population increased from 30% to the largest single group, 40% (this may not be typical). The black percentage went from 15% to 20%. And the Asian from about 5% to 10%. These figures encompass all Los Angeles County schools, including private schools, so they do not reflect white flight as a result of our recent busing efforts. But, as I pointed out, most of these figures are probably rather typical of national trends in education. Those of you in the community colleges observed these trends before University faculty saw them because the shift in population hit you first. It's just starting to hit the universities now. And, of course, it reached the urban areas before the rural areas.

Today at UCLA we are making a massive overhaul of the entire lower division program. Diagnostic testing, learning and basic skill development and counseling are becoming part of the regular program. But we're just beginning to overhaul the regular curriculum — ten years too late. We're drawing on all the resources we can find. At the University of California, Berkeley, Mike Heyman was recently appointed chancellor, in part because he thought that the lower division curriculum at Berkeley must be completely overhauled to make it more responsive to student needs, particularly the needs of minority students; he believed the overhaul would also improve the student retention rate. His views are set forth in a draft of the Berkeley Campus Plan. I recommend it to you.

Change is finally taking place. And, of course, this is what was needed all along — not remediation, but reform. Change the institution to meet the needs of the student, not change the student to meet the needs of the institution.

I wonder, as you probably do, what your role will be in this changing scene. I think you must play a central role, a critical role. I think you must

play the role of a change agent. Of course this depends very much on your self-conception, and I encourage a slightly different self-conception than I suspect you may have. You can't solve these problems. There aren't enough of you. But you can help others on your campus, especially faculty, to become aware of the problem. You can alert them to the possible responses available to them and get them to make the curriculum more responsive to the students. Try to change your institutions. To do so you must enlist faculty support. And you must avoid the security of hiding behind your learning skills centers and your separate budgets. You must get into the department chairmen's offices and into the deans' offices—that's where the curriculum is controlled. You must be part of it. You have a lot to contribute to the curriculum, its structure, its content, and its pedagogy. You must go to the source. And to be effective with the faculty, you must know your stuff. You must have competence in your basic discipline, psychology — educational, cognitive, or linguistic. You must also be willing to evaluate what you do. You are a young organization. It's not surprising that most of your panels are demonstrations: "Here's what we're doing." But I'd like to come back to one of your conferences in a few years and see your development, including reports on some failures: "This didn't work, and here's why. And from that we've learned how to do it better." You must be consumers of research. Above all, I think you must be willing to set standards for yourselves and to enforce those standards. In short, you must become professionals, and I think that's what WCRA is all about. You must be effective in shaping the view of others in your institutions and helping them set their agendas and priorities. You must work through them and enlist their aid and support.

And, of course, we must not forget the high schools. We in the higher education cannot survive without the high schools. Your colleagues in the high schools who teach composition, mathematics, social studies, and humanities share your frustration. They have a lot of talent and they have a lot of energy. Talk to them; work with them. From experience I know they will respond. They feel abandoned and blamed—they have been made the scapegoat. We must work with them.

If you get opposition, invite it in, make it part of the effort. But do so openly and be willing to change your own agenda and to respond to their needs. In other words, develop a broad constituency, many sources of support. Magnify your strengths by joining your strength with others. And, finally, be patient. Change comes slowly. I think the time for change is ripe. Institutions don't change themselves; environments change institutions. And the environment is changing rapidly. The demand from students is here. The demand from legislators is here. The funding from the federal and state government is here. You're getting a lot of support from administrators and faculty now. Capitalize on it. The change is happening right now. Lead it. The change will occur with or without you. Your only decision is what your role will be in directing the change. I think you have a vital contribution to make if you see yourselves as change agents. The next ten years will be decisive, will you?

THE MOTIVATION OF THINKING SKILLS

Mary Dillon

El Camino College and Los Angeles Valley College

Kneller (9:53), a U.C.L.A. philosopher of education, asks a broad question of educators. "Education is concerned with persons. What kinds of people do we want to bring up and for what kind of world? Such questions cannot be treated scientifically." This paper will attempt to investigate a small part of Kneller's question without the pretense of treating it scientifically, but rather, with the knowledge that for one teacher in one school for one year the teaching of thinking has been a reality.

Some experiments in the areas of intelligence testing, problem solving and creative thinking have provided promising data for the teaching of thinking skills. In his book, *Intelligence Can Be Taught*, Arthur Whimbey (20) provides the reader with several studies which tend to uphold the book's title. In the Milwaukee Project (13), I.Q.'s were raised from 94 to 124 in the experimental group over the control group. Another chapter explored Joseph Marron's (11) methods for raising SAT scores 139 points at the U.S. Military Academy at West Point. The Bloom and Broder (1) study requested students to think aloud as they problem-solved; then a comparison was made between high and low achievers.

The following are characteristics of low aptitude students: (1) read directions carelessly; (2) refuse to look at questions objectively; (3) place little value on reasoning as a method of problem solving; (4) do not see problems as being subject to analysis; (5) make cursory observations, then guess but never break down into basic elements; (6) are more interested in *what* the answer is than *how* it is obtained. This list contains a wealth of material for the teaching of thinking.

Artificial Intelligence Scientists conducted a symposium in 1971. Their concern was with ratiocination, i.e., induction and deduction, in relation to problem solving and game playing. The editors (5) of the proceedings chose articles emphasizing the interaction of logic and fantasy which characterizes human thinking. Their research on games provides credence for the use of games as effective vehicles in teaching. In the playing of games, the partici-

pants exhibit a variety of intellectual functions. In experiments with players of "pat" poker hands, characteristics of good and poor players emerged. Games can be used to acquire concepts vicariously, to develop the concepts and to implement the concept search.

The findings of recent brain research indicate that we can facilitate learning with understanding and comprehension by stimulating the brain to process information generatively. As an example, vocabulary words can be learned better and remembered longer if students generate a story about them. Emphasizing the generative aspects of learning and memory supports the teaching of thinking skills. Wittrock's (21) experiments with memory are useful as motivational devices in the classroom. He recommends the use of both verbal devices such as discussion, problem solving, stories and imaginative devices such as picture drawing, movie watching, diagram making, and picture showing.

Group discussions often turn into gossip sessions. The use of the Talker-Coach-Observor process is not only a good motivation, but, when used in the early part of a course, establishes roles for participants and can effectively prepare students for productive interactions. Staley (15) recommends the process as a precursor to group discussions.

Sternberg's (17) theory of componential models of analogical reasoning is informative for understanding the processes people use when they solve analogies. The use of Model III with a class will produce a better understanding of how to behave when solving an analogy than pages of practice on sample analogies. The Sternberg example, Washington:1::Lincoln:(a)10, (b)5, should be applied to the six steps in the model.

Rosenthal and Zimmerman (14) have contributed invaluable studies. Learning through observation is splendidly adaptable to the thinking skills class, especially when students are able to observe the desired end results of correctly thinking through a problem. Instructors benefit not only from a reduction of verbal directions, but also from a reduction in the frustration of trial and error learning. Vicariously derived concepts are mediated just like those acquired from any other learning method. Many of their findings support previously mentioned learning tactics or, at least, blend with them. For example, Rosenthal (14) found that adding modeling to practice significantly improves concept attainment but adding practice to modeling does little to boost knowledge. He recommends that modeled examples plus verbal guidelines produce the best results and that remembered imagery links are the key factor. Wittrock's (21) generative memory theory stresses the use of imagery. Students must be directed to image, he contends. Imaging is available through Rosenthal's (14) learning theory, in which students visualize the information as they observe it being modeled.

David Yellin's (22) review of the recent literature in psycholinguistics presents strong evidence for a language-thought relationship. The nature of the relationship is far from being solved, however. Replicating the three ring - three square experiment in the classroom helps students understand two principles. First, one can generalize a rule from a task; second, the use of

language in the performance of a task can influence the outcome. Students perform tasks with and without language and the results in favor of the language are significant. A student becomes more aware of the interrelationships between all the communication processes.

Kaufmann (7) has attached a cognitive style to the problem-solver. He divides people into two groups, Explorers and Assimilators. It is not only interesting but also necessary for the student to find out which style is his. The assimilator uses rational strategy, stretches known principles as far as possible and is guided by the principle of least effort. The explorer spontaneously seeks novel solution-alternatives even when standard schemata would work. This person has an uneconomical management of cognitive resources and his approach is open and flexible. The explorer generates novel and original ideas and solution alternatives. Students can diagnose their cognitive style by the way they solve a problem Kaufmann has devised.

Creative thinking

Thus far this paper has not been concerned with the improvement of any particular skill but rather with ways in which learners become interested in improving their ability in several general areas. The Kaufmann report is the first indication that two types of problem solving exist and that perhaps the explorer is also a student who thinks creatively. Emphasis on developing creative thinkers will be heavier in this last section as well as concentration on teaching some specific thinking skills.

A particularly motivating method for teaching comparison/contrast, in course where content is secondary to process, will be described. A journal article by Torrance and Sato (18) is used for an information base. Statistics given students orally are contained in the following paragraph:

Since Japan has emerged as number one in many areas of creative achievement, there exists strong motivation for our study of their thinking style. In 1978 Japan ranked first in the world for the number of inventions and patents registered, the number of novels published, the percentage of students completing high school, and their lack of poverty. Student achievement scores on International Tests in science and math are higher than other countries. Japan has less unemployment, higher wages, less pollution, a higher life expectancy, the best literacy figures, fewer transportation and communication problems, the lowest crime rate in the world with the highest percentage of criminals caught. They export more transistor products and more textile products than any other country in the world and their shipbuilding industry is second to none.

A comparison/contrast chart is constructed so students are able to see twelve differences between Japanese and American thinking styles. A few similarities emerge.

Next, it is necessary to apply the skill to either a social studies or English composition setting in order for students to transfer the skill. The content is suitable for any course involved with the study of different cultures, but it is advisable to use Goldilocks and Red Ridinghood (these people are well-known!) so that students can handle character comparisons if needed in other classes.

The Western reverence for logic and intellect seems opposed to the Japanese tendency toward intuition and creativity as an approach to problem-solving. Students can now be motivated in the direction of creative thought and the best follow-up method is to introduce an inductive process.

The Taba (4) Model provides an excellent method for teaching students to make observations and to form different types of inferences from them. It is process oriented and therefore it is wiser to let the students choose their own content area. Social sciences work best, but a subject which many students are taking or will eventually take is also good. Math, science, literature, oceanography or health are all accommodated under the Taba umbrella.

1. List data on a topic—teacher and students pool whatever you have. What food do you eat each day?
2. Observations in the list are grouped or classified. What meals do you eat each day?
3. The established categories are labelled through the construction of a chart for data retrieval. The function of the chart is to organize and display information for analysis.

Example of Chart on Nutrition

Balanced meals and unbalanced meals contain different kinds of foods.

	Breakfast	Lunch	Dinner
Balanced	{ Bacon Milk Eggs Toast Juice	{ Lettuce Cheese Fruit	{ Fish Rice Carrots Ice Cream
Unbalanced	{ Sugar Cereal Sweet Roll Orange Drink	{ White Bread & Jam French Fries Twinkies	{ Chocolate Milk Hamburger Ice Cream

4. Analyze the data in all the squares on the chart one item at a time and generalize about the information found in each cell.
5. Generalize about the data found in several cells.

6. Make explanatory inferences about the data found in the charts and the generalizations they have formed. Use "why" questions.
7. Students apply the generalizations they've formed in previous phases. This reinforces earlier learning, shows how to apply to the world at large and the question places students in a hypothetical situation.
8. Students summarize, e.g., compare good and poor eating habits. This step can easily be accomplished in one period.

Physics is effectively aided through simple tasks in proportional reasoning. Allow your students to attempt the paper clip/button problem (2). Without revealing answers, explain the main principles involved to those students who seem baffled. Give students who have solved it readily an opportunity to explain how they did it to students without the insight to solve the problem. Since Francis Colleas's (2) research is unpublished, an explanation of the problem follows:

If Mr. Short can be measured with 6 chained paper clips, but it takes 12 buttons to measure him, how many paper clips will it take to measure Mr. Long if 18 buttons represent his height?

The CoRT program (3), designed and developed in England by de Bono, is a composite approach to the teaching of thinking. There is a deliberate attempt to focus on the process of thinking rather than on the content of the problem. This enables all students to begin on a more equal footing than they would in their own class.

Sample problems used in the CoRT thinking skills system include: (1) Discuss the idea of everyone doing some sort of social work before taking a job; (2) What would happen if we removed all the seats from our buses? Students are given a code to use for each lesson. Samples of codes are: PMI (plus, minus, interesting points), OPV (opposite point of view), FOW (find other ways). Components of the code include: decision making, establishing priorities, prejudice, other views, guessing, conflict, emotional bias, and problem solving. The code is explained before the discussion.

De Bono claims a greater rate of skill transfer to problem solving in the real world than to problem solving in the students' content area subjects. He cites data collected from a series of experiments conducted by other teachers. The data consistently rated CoRT trained students over untrained ones. Learners with training generated many more ideas and they extended over a broader range of the subject. Research is still going on in this area, and new methods of evaluation are being developed in England by de Bono.

Rollo May's (12:60) quandary about original ideas "popping up from the unconscious" is resolved, in part, in his discussion of conditions necessary for the "pop" to occur. "All spontaneity carries with it, its own form," a premise of May's, motivates teachers to ponder about the production of creativity through form in their students' minds. Is Tovey (19) also looking for the link

to creativity when he advocates that the student involvement with language be used as a catalyst for cognitive development? How is this idea related to Smith's (16) when he remarks, "Concepts may be attained through reading, but they must be broadly within the grasp of the reader. Beyond this point, a reader must have help in understanding concepts before he can read."

The recent increase in problem-solving courses around the country is attributed to the belief that logical thinking has been overlooked and that procedures for attacking problems is related in some way to the determination of ability or intelligence. This increase was reported by Jack Horn (6) in a recent issue of *Psychology Today*.

May, Smith, Tovey, and Horn define a portion of the thinking skills as they relate them to their own experiences and background. Leavitt (10) expressed it in the most creative way when he said, "Problem finding is not about getting answers nor about getting results. It is about getting questions."

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ADULT LEARNING DISABILITIES

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Take a moment now to recall an adult you believe to be learning disabled. Does this adult have difficulty remembering information from one day to the next? Does the adult frequently respond to questions with totally unrelated statements? If so, this adult may be learning disabled.

As you read through the overview of adult learning disabilities presented in this article, continue to think of this adult. This overview discusses the most recent developments in the definition, characteristics, current literature, and program design related to the learning disabled adult. It is intended that this overview provide you with the background to assist the learning disabled adult on your campus.

Definition of a learning disabled adult

A careful examination of the literature reveals that the current definitions used by professionals in the field of learning disabilities do not accurately describe the learning disabled adult. An analysis disclosed that many of these definitions are derived from descriptions of the learning disabled child. Coles (3) indicates that the learning disabled adult has a normal IQ, exhibits no hyperactivity, and has few gross physical or neurological problems. Parker (6) states that the major manifestations of learning disabilities in the adult appear as disorders of input, output, memory and attention and emotional instability. These characteristics are different than those associated with the learning disabled child.

In 1978 Parker conducted a survey of all professionals in the field of learning disabilities throughout the state of Indiana and in all Adult and Community Education State Departments in the United States. This survey established that the major components of the definitions used by these professionals were: dysfunction in processing information, difficulty in acquiring basic skills, difficulty in learning by traditional means, failure to retain information, and difficulty processing language. The conclusion of this study

verified that these professionals were using different definitions that inadequately described the characteristics of the learning disabled adult.

The use of different definitions by professionals in the field of learning disabilities has contributed to the existing disparity in the statistics describing the number of learning disabled adults. These percentages include: 3% among high school adults, 15%-20% among adults in general and 60% among the adults in the Adult Basic Education classes surveyed in Ohio.

The discrepancies in the definitions and the statistics have created a climate of concern and dissatisfaction among the professionals. Brown (1) states that a new definition will soon emerge which will incorporate the characteristics of most learning problems. The learning disabled adult will be defined as any adult unable to learn regardless of cause. The exception will be the adult diagnosed as mentally retarded.

Characteristics of the learning disabled adult

Research concerning the characteristics of the learning disabled adult is limited. However, it is possible to uncover characteristics by looking through the literature. These characteristics can be separated into the areas of academic, social/emotional, and processing. Remember that the characteristics of a learning disabled adult do not occur in isolation but appear in patterns unique to each individual. For example, one learning disabled adult with a reading problem may require the whole-word remediation technique while another adult with the identical problem may require a structured phonics approach. It often requires a skillful teacher to unravel an individual's characteristics since the learning disabled adult has had many years to perfect his coping skills.

Academic characteristics are discussed thoroughly in the literature. One notable trend is that learning disabled adults often perform poorly in some subjects and excel in others. Some experts use this discrepancy to differentiate these adults from others with problems related to lack of motivation or mental retardation. In reading, the characteristics include confusion with words, ability to state the words but not to comprehend meaning, and inability to read for inference. In writing, some common characteristics are immature handwriting, spelling errors, rigid writing patterns, and consistent difficulties with organization such as the inability to identify the main idea or the supporting details. Speech characteristics are illustrated by adults who give monosyllabic answers. Adults who are unable to follow directions illustrate a common listening problem. Thinking problems revolve around the difficulty to organize or remember material. In mathematics, two of the more common characteristics include the inability to remember a mathematical process from one day to the next and the inability to identify problem solving patterns. Learning disabled adults often have poor work habits including poor organization of time, ideas, papers, notes, or homework. Some of these adults compensate for this with extreme organization.

Siegel's (7) landmark book on learning disabled adults entitled *The*

Exceptional Child Grows Up states that the social/emotional characteristics may provide the real basis for similarity among learning disabled adults. They may all have different academic characteristics, but most will exhibit poor self concepts, social immaturity, and communication inadequacies in social situations.

Discussions concerning problems in visual memory, auditory memory, and visual figure-ground problems, continue to appear in the literature. However, the treatment of these processing problems in isolation is receiving less acceptance.

A review of the current literature

As part of a two step process to establish a special student services program for the learning disabled adult at Anchorage Community College, a search of the current literature was conducted. The result of this search was an annotated bibliography, compiled by Patterson (5), on Adult Learning Disabilities. The sources for the bibliography included an ERIC, a SMERIC search, graduate courses in learning disabilities and the Region X Adult Basic Education Consortium Workshop on learning disabled adults. The bibliography compiled 54 articles, book, pamphlets, reports and speeches from these searches, selecting those identified by the descriptors "adult learning disabilities" and "adult learning problems" and published since 1970.

The listings in the bibliography are separated into the following six areas: college programs, case studies, basic skills programs, Adult Basic Education programs, research and longitudinal studies. The articles in the area of college programs state that the most recent programs tend to focus on both the social/emotional problems and the academic problems of the learning disabled adult.

The case studies emphasize the need for public awareness. Two current books exemplify this: Eileen Simpson's (8) *Reversals: A Personal Victory Over Dyslexia* and Louise Clarke's (2) *Can't Read, Can't Write, Can't Talk Too Good Either*. Some case studies stress the importance of the social/emotional consequences of a learning disability—illustrating how the learning disabled adult's problems affect his entire life including family, job, school and friends.

Several articles appeared in the area of basic skills and learning disabilities. These articles outlined ways to identify and remediate learning disabled adults in the college classroom. An area often overlooked by college teachers are the programs offered by Adult Basic Education for learning disabled adults. These programs are rich sources of remediation techniques.

The research articles describe controlled studies of learning disabled adults. These articles have been published primarily in medical journals. Recently, however, descriptive research has appeared in a variety of other journals.

The final category includes longitudinal or follow-up studies. There are a limited number of these studies in the field of learning disabilities. The

methodology used in these studies appears to be faulty; they have small samples, no control groups and questionable ways to measure success. The trends in these studies are difficult to discern. One follow-up study on remediation may report successful results while another describes remediation as an ineffective method for improving basic skills.

The foundations program design

The Foundations Program is a comprehensive design to assist learning disabled adults in college. The goals of the program combine concepts presented in the current literature regarding definitions, characteristics and research findings concerning learning disabled adults. The six major goals of the Foundations Program are:

1. Each student will be treated as a individual with unique characteristics and problems.
2. A wholistic approach will be used with each student to assist in the solution of academic, social, emotional, physical and personal problems.
3. Grill's (4) concept will be used to provide different services for the severely learning disabled and the mild or moderately learning disabled.
4. Each student will be integrated into the entire college population.
5. The program personnel will create a supportive setting, where each student can develop a positive self-image and practice assertiveness training techniques.
6. Members of the faculty and staff will offer in-service workshops to promote understanding and support of the program.

In an effort to meet the diverse needs of learning disabled adults, the Foundations Program is composed of three major phases. These include a core of remedial/developmental courses available to learning disabled adults with severe learning problems, a large learning laboratory providing materials and personnel to assist adults with minimal learning problems, and a series of in-service workshops for the entire college faculty and staff. The core remedial/developmental courses provide students with a complete diagnosis of academic and non-academic problems, an individual contract, and an interpersonal, individualized, and interdisciplinary team teaching approach to the basic areas of reading, mathematics, and communication. The methods of instruction include individual conferences, small group discussions, large group discussions, and laboratory experiences. The services integrated within the Foundations Program include a learning disabilities specialist, personal and academic counselors, a speech, hearing and language clinician, specialists for handicapped adults, peer tutors and a list of individuals and agencies who will provide supportive services.

The learning laboratory provides corrective instruction to adults with minimal learning problems by assisting them with specific short term objectives in the areas of mathematics, reading and communication. Adults using

this laboratory have access to programmed material, college faculty in their area of need, an educational assistance responsible for the management of the learning laboratory, peer tutors, and all specialists available in the core courses.

The Foundations Program also offers a series of in-service workshops and conferences to all college faculty and staff. These workshops increase the staff's awareness of alternative teaching techniques, learning problems experienced by learning disabled adults, methods of integrating study skills into traditional content courses and the services and the philosophy of the Foundations Program. These workshops establish and maintain an open line of communication between the general faculty and the program personnel. The Foundations Program by providing these three phases establishes itself an integral part of the college.

Conclusion

Take a moment to recall the adult you believed to be learning disabled. It is anticipated that this overview describing the most recent developments in the areas of definition, characteristics, and the current literature, as well as the description of the Foundations Program will provide you with the background needed to assist this adult and others you believe to be learning disabled on your campus.

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VOCABULARY DEVELOPMENT FOR STUDENTS OF ENGLISH AS A SECOND LANGUAGE

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During the early to mid-seventies, faculty members at El Reno Junior College became concerned about the increasing numbers of international students with low proficiency in English who were enrolled in their classes. A special course in English for Foreign Students was devised. In 1974 a course in Introduction to Communications was added as a requirement for international students. A Level Five proficiency (to be raised to Level Six in 1975) as certified by an ESL school was added as a requirement for admission. As noted by Payne (19), students having certification at Level Six show wide variations in achievement. For example, in reading, students with certification at this level frequently vary from 2nd to 6th grade levels in vocabulary and from 3rd to 7th in comprehension, as measured by the *Gates-MacGinitie Reading Test*. (8)

Nothing in my training as a reading specialist had prepared me to understand the problems facing our international students. Considerable emphasis had, however, been placed upon viewing students as individuals with specific needs. The importance of adapting instruction to a level at which students could succeed had also been stressed. These guiding principles were to serve as the basis for developing a program of instruction in English communication skills for ESL students.

The purpose of this paper is to share insights gained over some five years of working with international students in developing their English communication skills. While the development of vocabulary is the primary focus, other aspects of second language acquisition must also be considered. Vocabulary development is only one aspect of acquiring a second language, and must be viewed in its proper perspective.

The role of vocabulary development in second language acquisition

In two studies conducted by Yorio (24), ESL students were asked to rank problems they had in reading English. In both studies, they ranked vocabu-

ary as constituting their main problem, with grammatical problems ranked as causing far less difficulty. While students regard vocabulary as the most difficult aspect of learning to read a second language, in actuality this may not be their greatest problem. Goodman (11) presents a model of reading in which the reader uses his knowledge of the language to help him predict or select tentatively cues needed for comprehending reading materials. Yorio (24:108) agrees with Goodman's basic tenets about the nature of reading when it occurs in the reader's first language, but suggests problems when the reading occurs in a foreign language, stating:

When reading in a foreign language ... new elements appear: (1) the reader's knowledge of the foreign language is not like that of the native speaker; (2) the guessing or predicting ability ... is hindered by the imperfect knowledge of the language; (3) the wrong choice of cues ... makes associations more difficult; (4) ... memory span in a foreign language ... is usually shorter than in our native language; recollection of previous cues, then, is more difficult ...; (5) at all levels, and at all times there is interference of the native language.

Problems of second language acquisition are more complex than the mere acquisition of vocabulary. While the student is inclined to focus on unknown words as the problem, particularly once he believes he understands the basic structure of the language, the solution is not that simple. Gleason (10:13) notes the importance of teaching students to analyze language structure and to rely heavily on context in predicting meaning of individual words, stating:

I must emphasize that I am advocating student analysis for two distinct, mutually reinforcing reasons. First ... it is usually the most effective way to get many crucial points across. Second, it builds a skill that will be needed in later language learning when there will be no teacher at hand to provide a needed explanation.

Vocabulary selection for ESL students

Perhaps one of the most puzzling questions regarding vocabulary development for ESL students is, "What vocabulary shall we teach?" Alkhuli (1) suggests four criteria for determining vocabulary selection for the beginning student: immediacy, regularity, utility, and frequency. Unfortunately, these criteria may contradict one another, with the criterion of regularity posing the biggest problem in this regard. There are instances, however, in which the criteria overlap. A frequently used word tends to be a useful word. A word related to the learner's environment tends to be useful as well as immediate. Perhaps the only solution is to set priorities and proceed by choosing those words that meet the greatest number of the criteria that are most significant for the group being taught.

One of the most important criteria is that of frequency. Lists such as those compiled by West (22) and Thorndike (21) offer valuable information for vocabulary selection. Thorndike's lists, which include the 500 most commonly used words, and give the frequency of use for 30,000 words, are among the most usable.

While Lado (16), Allen (2), and others warn against a simplistic reliance on such lists, their usefulness should not be overlooked. One of the major problems with such lists is that many of the words have a multiplicity of meanings. Horn (13:97) notes that the 500 most commonly used words have a total of 14,070 meanings. It seems apparent, however, that ESL students need to have at least *one* meaning for each of the 500 words. It is not uncommon to find students who have completed Level Six of an ESL school without acquiring even this proficiency. Additional practice for students needing it can be provided with such materials as *Reader's Digest Readings, Book One*, which are based upon the 500 word list. (15) Materials can also be found in this and other series that are based upon the first 1,000 words, the first 1,500 words, etc.

Two other criteria of particular importance in selecting core vocabulary are those of immediacy and utility. Special needs of students arising from their specific environment must be taken into account and techniques for helping them acquire words of immediacy and utility should be considered.

An important distinction related to vocabulary acquisition is that between vocabulary for production and vocabulary for reception. Various estimates have been made as to the minimum number of words necessary for ordinary communication situations. Ogden (18) uses 1,000 words for Basic English. West (23) suggests that a 2,000 word vocabulary is adequate for most production purposes. Alkhuli (1) suggests, however, that the minimum number of words adequate for writing in English is three thousand.

A person's vocabulary for reception is almost always much larger than his vocabulary for production. Alkhuli (1:65) notes, "... it is held that the minimum number of words adequate for reading English books is seven thousand ...". The number of words the college student needs for listening is difficult to determine. In addition to learning the common core vocabulary known to most native speakers of English, he will also need to learn the specialized vocabularies peculiar to the academic disciplines he is studying. Lado (16:280) indicates less concern for the problem of specialized vocabulary because "specialized vocabularies have to be learned by native as well as non-native speakers." For the college student trying to learn an academic subject in his second language, however, the problem of a specialized vocabulary must add to the complexities of an already difficult situation. Effective techniques for acquiring specialized vocabulary as well as core vocabulary need to be explored.

Instructional strategies

What, then, are some of the most effective techniques in helping students

acquire vocabulary? Alkhuli (1) lists several ways in which the meaning of a new word may be presented: (1) direct association; (2) pictures; (3) action demonstrating the meaning of verbs; (4) context; (5) giving a synonym for the target word; (6) giving an antonym; (7) giving an English dictionary definition; (8) translating the word into the native language. In addition to these ways of introducing a new word, Alkhuli also recommends teaching common root forms and affixes as a method for general vocabulary expansion.

A recent study by Gipe (9) is concerned with the relative effectiveness of four methods for teaching word meaning. In this study four methods were tested: association, context, category and dictionary. A significant difference was found between methods, with the context method being the most effective. The association method was found to be second most effective but did not show the overall effectiveness of the context method. The category and dictionary methods were found to be the least effective. The importance of introducing new vocabulary to ESL students in context has also been emphasized by Finocchiaro (7), Alkhuli (1), and others.

In considering the various techniques suggested, we might briefly mention some particularly helpful commercial materials. The *Bergen Evans Wordcraft Series* (6) presents the target word in a meaningful sentence. Then synonyms are provided and substituted in the original sentence. This approach combines the two methods of context and association that were found most effect in the Gipe study. Further, these materials are in a filmstrip-cassette format that allows the student to hear the pronunciation of the words in context and see them in print at the same time. The *Barnell Loft Pictocabulary Series* (4) offers help with introducing vocabulary through pictures. This series is especially valuable for ESL students who already have many of the concepts pictured, but do not know the English words for them.

In addition to these commercial materials, several approaches to vocabulary development have proven especially helpful. The cloze procedure, for example, has proven valuable for both testing and instructional purposes. Several variations on the basic cloze design may prove beneficial to the ESL student. Jonz (14) developed a multiple choice answer variation. Antier (3:13) recommends cloze for listening comprehension training and testing, stating: "I prefer to use shorter pieces, to be dictated in a quarter of an hour's time, and deleting, say 20 to 30 words according to their grammatical or lexical interest."

The Language Experience Approach is a linguistically based strategy recommended by Hall. (12) For the ESL student this approach could involve field trips that provide the direct experience considered so important by Finocchiaro (7), Gleason (10), and others.

Another promising approach to vocabulary development for the ESL student may be found in developing vocabulary through dramatization. Duffelmeyer and Duffelmeyer (5) recommend this method for both first and second language acquisition. Allen (2) has also elaborated on this technique for ESL students, noting the importance of adapting and composing

dialogues and narrative materials to show how words work in "real life" situations.

Conclusion

In concluding our look at vocabulary development for the ESL student, it seems important to ask, "What can we hope to accomplish?" With the many different purposes, needs, and motivations for learning English that ESL students have, how can we hope to help them achieve their goals? Perhaps Gleason (10:11) has given one of the best answers to this question when he says: "There is only one real solution. A language course must always do two things: give some portion of the common core, and prepare students for effective self-instruction."

The development of skills in self-instruction in English should be included as an integral part of the instructional strategies used in vocabulary development for ESL students. It is also important for the ESL instructor to recognize the roles of attitude and motivation in second language learning, particularly in regard to their impact on self-instruction.

Studies by Lambert (17), Spolsky (29), and others have shown that the ESL student's attitude toward people who speak the language he is trying to learn and the type of motivation he has for learning will significantly affect the level of proficiency he is able to achieve in the target language. Such studies have shown the superiority of integrative motivation over instrumental motivation in second language acquisition. Motivation is said to be integrative if it is based upon the desire to become a member of the target language group. It is said to be instrumental if it is based upon more utilitarian purposes, such as getting ahead in one's occupation or attending college in a country in which classes are taught in the target language.

It seems apparent that the student learns best in a situation in which he socializes freely with speakers of the language he wishes to learn. The development of friendships among ESL students and American students on our college campuses will surely result in more powerful motivation for the continued practice and self-instruction necessary for acquiring fluency in the language.

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COLLEGE READING STUDIES: DO THEY MAKE ANY DIFFERENCE?

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Reading-study programs mushrooming on college and university campuses represent one of the most rapidly growing, diverse, and responsive aspects of academic life. In California alone 80 percent of state colleges and universities now provide such assistance; nationwide, 60 percent of college campuses offer reading-study-writing programs supplemental to traditional course offerings. (1,2) One recent computerized nationwide survey revealed that nearly all centers in universities in the United States were developed within the last ten years. (2) Furthermore, reading-study-writing programs are not limited to remedial efforts. This has been well established by the widespread status and recognition accorded programs at Harvard (since 1915) and Stanford (1969) and by the elite students and faculty groups who participate in them. In an era of economic limitation, however, faculty and administration throughout the nation are concerned over cost effective factors and are interested to know what differences such instruction makes in student performance. Are such programs worth the cost? To what degree do they aid the students who participate?

Procedure

To investigate these questions, extensive search procedures were utilized to identify research reports and dissertations written between 1960-1977 relating to the effectiveness of college reading and study programs. The meta-analysis*, a statistical procedure introduced by Glass (3), was then employed in order to analyze and integrate findings from the number of individual studies and to determine any composite benefits of

* Meta: Greek word meaning beyond, above or over, used by Glass to refer to analysis of a large collection of individual statistical results in order to integrate their findings.

instruction. From the initial list of 676 references, sixty-six studies were identified which reported data in quantifiable terms and appeared to meet the research criteria. However, only twenty-eight studies employed adequate controls and maintained satisfactory validity. These studies reported mean gains between treatment and comparison groups on one or a combination of the following five variables: changes in reading rate, in comprehension, in Grade Point Average, in vocabulary and in study habits. These twenty-eight studies, representing 6,140 students who enrolled in reading study programs or served as controls, comprised the meta-analysis.

The meta-analysis procedure utilized "effect size" statistics for each treatment outcome reported. The "effect size" as measured on the outcome variable (for example, reading rate) was the difference between treated and untreated groups divided by the within group standard deviation. Each effect size thus became an observation and inferential statistics were applied. In this case the dependent t-test was used to determine if the two groups differed significantly. Each study was also examined for reported inclusion of six content factors, seventeen operational factors (4) and program effects. The formula (3) used for this calculation was:

$$ES = \frac{\bar{X}_T - \bar{X}_C}{S_c}$$

Each study was categorized on the basis of its description of the students participating. Three categories identified were: (1) corrective-remedial programs, generally high-risk, open admission students with minimal admission qualifications who often were required to participate; (2) academic support programs, frequently freshmen or sophomores on probation; (3) developmental programs, usually those programs open to all entering freshmen and/or other college students.

The paucity of programs reporting adequate data was a limitation to this study. Reports frequently did not specify those program content and operational factors which could permit subsequent investigations to replicate the study.

Findings

From the twenty-eight studies which comprised the meta-analysis, sixty-six treatment effects were computed. These effect statistics integrated the composite benefits identified for the total sample of 6,140 students enrolled in college reading-study programs or serving as controls. Overall reading-study instruction did prove generally beneficial as measured by dependent variables such as reading rate, comprehension, Grade Point Average (GPA), vocabulary and study habits. Figure 1 illustrates these composite findings, using a normal distribution. The mean effect size for the 66 treatments was 0.94 with a standard deviation of 1.76, and statistically significant (.05) gains were made by treated subjects over untreated controls.

In other words, the average student receiving college reading-study instruction was "better off" than 83% of untreated students.

To answer questions relating to the specific nature of the gains made by the students, the reports of change in reading rate, comprehension, GPA,

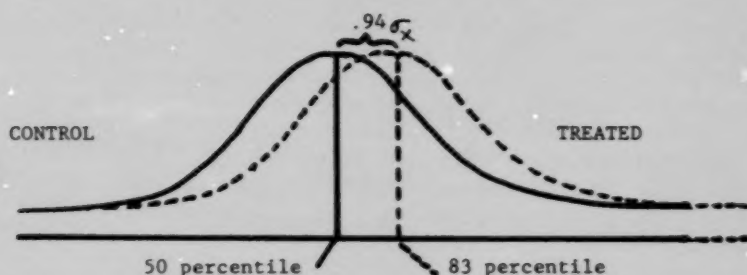


FIGURE 1

The composite effect of reading-study instruction in relation to untreated control groups, based on 66 effect sizes computed from 28 individual studies of students enrolled in college and university reading-study programs. It represents 6,046 treated and untreated subjects. σ = standard deviation.

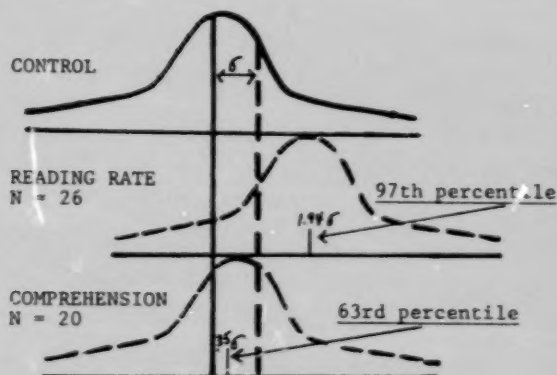


FIGURE 2

Normal curves depicting the effects of treatment with college and university students in relation to reading rate and comprehension benefits as compared to untreated control groups.

vocabulary and study habits were examined. Figures 2 and 3 illustrate these findings, using a normal distribution. Significant gains were made in four of the five variables tested (1) in reading rate ($t = 2.40$); (2) in comprehension ($t = 2.84$); (3) in GPA ($t = 2.5$); and (4) in vocabulary ($t = 2.68$). Gains in reading rate were appreciably larger than the other three variable outcomes.

These findings may suggest that reading rate responds to treatment/testing more readily than other variables measured. The effect of increased rate/comprehension on students' work effectiveness was examined by Grob. (5) Secondary students reading slowly were found to spend excessive amounts of time in reading-study, a finding which was not unexpected. In this study, typically students in treatment groups increased their rate by 200-150 words per minute. Gains in comprehension were also statistically significant. Interpreted in relationship to reading rate gains, it indicates, as numerous other researchers have noted, that students receiving instruction in college reading-study programs increase their rate appreciably with smaller yet significant gains in comprehension. In other words, they were able to read college materials faster with greater understanding.

One unexpected benefit of instruction was the statistically significant gains measured by changes in GPA. Post-instruction GPA mean gains made by the treatment groups were not reflected in the meta-analysis, although in

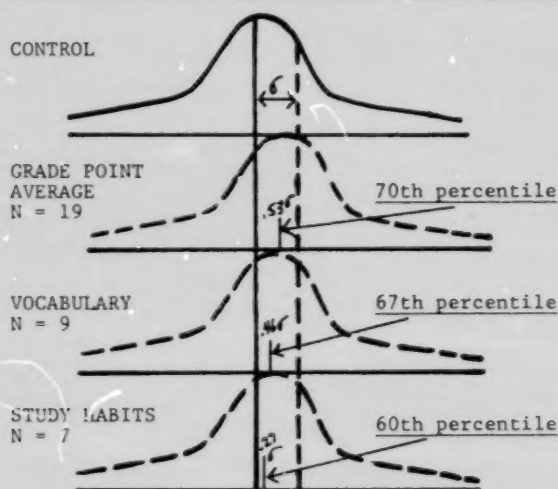


FIGURE 3

Normal curves depicting the effects of treatment with college-university students in relation to Grade Point Average, vocabulary and study habit benefits as compared to untreated control groups. σ = standard deviation.

several studies such gains reflected a significant accumulative benefit. Typically, participants reported by the meta-analysis achieved a .37 GPA advantage over non-participants at the conclusion of the instruction. This does not reflect post-instruction gains in GPA measured over longer time sequences; for example, over one, two or three semesters.

The relationship between program effect and content and operational factors was less conclusive due to the deficiency of reporting these factors noted previously. A complete analysis is reported separately by the author. (6)

Conclusion

College reading and study instruction makes a difference in students' reading rate, in their comprehension, in their GPA, as well as other accumulative benefits. Statistically significant benefits were found for those students who participate in such programs.

1. For the 6,140 students who participated in college reading-study programs or served as controls, significant composite gains in rate, comprehension, vocabulary and Grade Point Average benefits were found. The "average student" receiving college reading-study instruction was "better off" than 83% of untreated students.
2. The specific nature of these gains was also of interest. In four of the five variables tested, statistically significant changes occurred. Typically, students increased their reading rate by 100-150 words per minute with corresponding increases in comprehension. In other words, they were able to read college materials faster with greater understanding.
3. An unexpected benefit of instruction was the significant gains measured by changes in Grade Point Average with participants achieving a .37 GPA advantage over non-participants at the conclusion of instruction. However, subsequent GPA benefits over longer time sequences, where greater benefits would be expected to accrue, were not examined by this analysis.

Since college students are expected to spend a considerable time in reading and study, such increases in their efficiency logically appears to enhance their chances of academic success. The relationship between slow reading rate and attrition appears to be only one productive aspect for further investigation. Faculties and administrators are concerned that students' study times are legitimately productive. The growth of college reading and study programs is one indication of this concern. Perhaps on the college campus we are now ready to accept the statement attributed to Goethe at age seventy-one: "I have spent my lifetime learning to read."

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EXAM PREPARATION STRATEGIES OF COLLEGE FRESHMEN

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Virtually every study skills course contains a section on exam preparation and test taking, and few topics are more interesting to students. Generally, study skills instructors anticipate the difficulties students are likely to encounter and try to teach them a repertoire of study techniques to overcome these projected difficulties. But do the difficulties we foresee and the techniques we teach match the difficulties students actually experience and the techniques they find successful? Recently, we were able to answer this question by looking closely at the exam preparation and test taking strategies which students reported using and comparing them with common models in study skills texts and classes.

In May, 1978, over 2000 U.S.C. students (approximately 80% of the freshman class) wrote an essay as part of their freshman composition final in which they identified the most difficult exam they had taken during their freshman year. They explained why the exam was difficult, described the methods they used to prepare for the exam, and evaluated the effectiveness of their efforts. By performing a content analysis on a sample of these essays, we discovered not only which exam preparation strategies students used and found effective, but also why they found exams to be difficult.

Procedures

We randomly selected 195 essays for content analysis, a sample size which permitted us to generalize our findings to our total population at the .05 level of confidence according to Slonim. (1)

After paraphrasing each statement in the essays selected and copying them onto a data summary sheet, we constructed a taxonomy of responses for each of the three major categories: reasons for exam difficulty, methods of preparation, and results of preparation. This classification system, which contained 22 subcategories and 142 different elements within the sub-

categories, was used to code the 1603 statements on the data summary sheets.

Results

Each student wrote varying numbers of statements in each category as well as in each subcategory. Therefore, unless otherwise indicated, the percentages reported are based on the number of responses in the category or subcategory being discussed rather than on the number of student essays analyzed.

Exams identified as most difficult by the students included 33 different classes: 36% located in the Natural Science Division; 36% in the Social Sciences Division; 16% in the Humanities Divisions; and the remaining 12% in the School of Fine Arts and Business. Five classes—introductory chemistry, biology, psychology, economics, and math—accounted for 52% of the total classes.

Reasons for exam difficulty

The 412 statements giving reasons for exam difficulty were classified into four subcategories: (1) the student's own characteristics or behavior—46%; (2) content of the exam or class—37%; (3) exam format—8%; (4) professor—8%. In the largest subcategory, student characteristics or behavior, 43% of the 190 statements indicated that their study skills were to blame. Only 14% attributed their difficulty to a poor high school background or a previous difficulty in learning a subject. The rest of the statements in this subcategory focused on the students' attitudes and feelings. The largest psychological factor—mentioned by 28% of the response—was anxiety about performance on the exam. Relatively few (9%) of students' statements identified negative attitudes toward the class and professor as a factor.

Looking next at the subcategory of exam class content, we found that 47% of the 141 statements reported that the extensive reading required by a class and/or the cumulative nature of the exam created difficulty. Students less frequently identified the following problems: the difficulty of the subject or assigned reading (18%); the need to understand, integrate, synthesize material or the need to formulate their own ideas (16%); and memorization of numerous facts, formulas, terms, etc. (10%).

Methods of preparation

Methods of preparation, the second major category of responses, contained by far the largest number of statements—771. Of these, 54% described review techniques; 20%, the amount of preparation time; 9%, the students' attempts to manage their feelings and attitudes; 6%, the use of study groups; 4%, study breaks and snacks; 4%, the use of study aids (including professional lecture notes and study guides, review sheets and class syllabi provided by the professor, and materials obtained from fellow students); and 3%, the study location. Specific techniques mentioned most frequently were memori-

zation of material (14%); making up practice questions or redoing old problems (14%); rereading part or all of the assigned material (11%); and making up study sheets or flash cards (11%).

Statements about the amount of time the students studied for the exam showed that 17% studied briefly or only the night before the exam, 14% studied 2-3 days, 17% studied 4-7 days, and 25% studied more than a week. In addition to these specific time periods, we identified an approach which we termed "study marathon" to describe an intense period of study in which the students prepared exclusively for one exam. During the marathons, students often studied 10-12 hours a day for period ranging from one day to two weeks before the exam. Twenty-seven percent of the statements indicated that the student had engaged in a study marathon.

Results of preparation

These responses were divided into eight subcategories which identified the academic outcome (35%); evaluated the methods of preparation (15%); described the students' physical state before the exam (1%); their psychological state before the exam (15%); and after it (27%); their reaction to the format (3%); difficulty (5%); and content (9%) of the exam. Of the 64 statements evaluating the effectiveness of the study methods used, 73% reported that the methods were successful or very successful. Twelve percent found they were fairly successful and 14% said they were unsuccessful. The grades reported confirmed the success of the methods used: of the 148 statements reporting grades received, 26% said they received an A, 17% a B. Another 22% said the outcome was successful but did not specify a grade. Of the remaining statements, 18% did not yet know the grade, 11% reported that they received a satisfactory grade or a C, and 4% indicated they had received a D or an F.

Discussion

In looking at the reasons students gave for exam difficulty, we found some surprises in two of the categories. First, the perennial complaints about teachers' ineptitude and idiosyncrasies that circulate in the halls did not find their way into these students' essays. Very few students blamed poor quality of teaching for their difficulties. Another aspect of received wisdom was also challenged by our data; a very low percentage of students' comments blamed the exam format for their difficulties. Does the fact that few commented on the length or terminology of the exam, confusing multiple-choice questions, or all-inclusive essay questions suggest that study skills teachers should downplay current emphasis on a close reading of exam questions that includes a careful consideration of qualifiers and signal words? Probably not. Difficulties with exam format and individual professors should be viewed as local problems, occurring in specific classes, rather than general problems which exist widely. Since students are likely to encounter problems with exam format or professors at some point in their college career, instruction in

coping with these difficulties merits some emphasis, although not priority in the study skills class.

While the data points at students' unawareness or unconcern with problems of format, the data highlights three other interrelated causes of students concern. First, students were overwhelmed by the massive amounts of material to be covered during the semester and then to be reviewed for the cumulative final. Conditioned by their high school experience, they expected short assignments and regular quizzes. After falling behind in their assignments early in the term, they had difficulty catching up and could not prepare adequately for the final examination. Although students did mention other types of study skills deficits — inadequate reading or notetaking skills, memory or comprehension problems, and inexperience with college exams — twice as many comments focused on time problems than all other types of study skills combined. Third, students' emotional reaction to their study experience — anxiety about their exam grade or performance — was cited as the largest single reason for exam difficulty. Since final exams usually count heavily in determining a students' final grade, such anxiety is understandable, and likely to be intensified if the students are behind in their assignments and overwhelmed by large amounts of material they have to cover. Certainly some anxiety can be allayed if students learn how to manage their time and how to improve reading, notetaking and other study skills. However, our data suggests that the study skills class should also help students manage the sometimes debilitating stress that affects even successful students.

The responses on the amount of time spent studying yielded data with important implications for the study skills class and counselors. We were most interested in the students we had labelled the "study marathoners," because their technique seemed to resemble "cramming," a procedure universally condemned as ineffective. We defined the "marathon" as a period of intense study and review in which the student — often isolating himself from others — focuses exclusively upon a particular course. These marathons varied in length from two days to two weeks. A small group did study only the night before the exam, and for them the marathon was indistinguishable from the classic last minute cram sessions. For another small group, the marathon lasted from two days to two weeks; but for over one half, the study marathon lasted from two to seven days.

When we looked at the exam grades reported by our study marathoners, we found that only three said the approach was unsuccessful or resulted in a D or F grade and these three had studied for only one night. Half the students said they received either an A or B on the exam.

Such results suggest that study skill instructors might question the review-through-the-semester model which dominates most study skills texts and courses. Only a few highly organized self-disciplined students reported using such a strategy — 4% of our total — leading us to conclude that such behavior is essentially a "non-event" in the lives of college students, espe-

cially freshmen. Furthermore, since the extended study marathon of more than one day worked quite well for many students, there is little incentive for them to change their approach. The marathon seemed particularly helpful to two groups of students: for those desiring an A in a class requiring integration and synthesis of large amounts of difficult material, and for those wishing to bring up a low grade to passing or above who had not fallen hopelessly behind.

Data from this study added support for a policy of careful advisement of students. Some students, attempting to "get their requirements out of the way" as quickly as possible, take too many demanding courses before they have developed the skills to cope with large amounts of complex information. Study skills instructors can compliment the efforts of other college advisors by pointing out the difficulties students are likely to encounter by enrolling in too many demanding courses and openly discussing "contingency plans" available to students in case they find themselves in trouble—dropping a course rather than "toughing it out," asking the professor or teaching assistant to recommend a simpler text on the subject, forming study groups for mutual academic and emotional support, locating private tutors. The success of the study marathon techniques further indicates that students who find themselves in academic difficulty at midterm are not hopelessly lost and that by identifying these students and providing them with skills instruction, we can improve their chances of completing their courses satisfactorily and remaining in school.

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THE LAST CHANCE: A PROGRAM FOR TRANSFER STUDENTS WITH LOW GPA'S

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Colleges and universities desire academically successful and competent students, and entrance requirements are made to increase the likelihood of that outcome. Justifiably, admissions counselors are reluctant to admit transfer students with low GPA's; however, the results of a two year experimental program with such students at a medium-sized state university show that more than 50% can achieve GPA's greater than 2.75 in one semester.

In 1976, an effort to make the most reasonable and humane decisions regarding students requesting admissions to Southwest Texas State University resulted in the formalization of a one-semester admissions policy by the Admissions Office for non-qualifying transfer students who pleaded special circumstances. For two semesters, a small group of students ($N = 74$, $N = 59$) were accepted with the provision that they complete 12 credit hours with a specified GPA. These students were recommended to seek academic support in the University's Learning Assistance Center. The success ratio was 39% and 45% respectively.

Dissatisfied with these results, the admissions office enlisted the aid of the University's Learning Assistance Center and its staff. The initial conferences yielded a behavioral contract which was partially introduced in Fall 1977. That contract required special academic advising sessions plus individualized work in the Learning Assistance Center. The statistical results (48% completion) from that semester showed no significant increase. The Admissions Office and the Learning Assistance Center, convinced of the value of this special admissions program, began a series of revisions.

Revisions

Criteria of eligibility and GPA requirement

The first revision was a specific list of criteria to identify students who would be offered a probational contract and a corresponding formula to calculate the required GPA.

1. Students with a GPA of 1.80 to 2.00 having less than 60 hours were automatically offered a probational contract.
2. Students with a GPA of less than 1.80 having less than 60 hours were automatically rejected. If a student appealed, he could be offered a probational contract if the reason for his poor academic performance was one of those listed below:
 - "prolonged illness" — statement from attending doctor required for files.
 - "trying to combine work and school" — (40 hours or more of work per week) — statement from employer at that time required for files.
 - "extenuating circumstances" — such as family or drug problems. Statement from counselor, clergyman, etc. regarding presence of this situation required for files.
 - "been out of school for over 5 years—had no goals at that time"—copy of student's transcript required for files.
3. Students with a GPA of less than 2.00 having more than 60 hours were automatically rejected. If a student appealed, his case was reviewed and decided upon by the Admissions Committee.

While the intent of the GPA formula was to require that the student raise his cumulative GPA to 2.00 or better by the end of one semester, some few students from categories 2 and 3 above were exempt from that requirement because it was mathematically impossible. These students were usually required to make a GPA from 3.00 to 3.50.

Training of staff

The second revision involved training the admissions staff in all of the options open to a student entering the University under a probational contract. In addition, printed materials were created by the LAC to aid students in choosing the appropriate option.

Analysis of target population

After several semesters involvement, the LAC staff realized that many of their original presumptions about these students were faulty. Instead of marginal academic students with skill deficiencies, the students in this special program exhibited the following characteristics:

- Average to superior intelligence
- Middle to upper social economic status
- Average age of 20 to 25 years, with a range extending to 60 years
- Prolonged history of inappropriate academic behaviors (class cutting, procrastination, poor problem solving abilities, avoidance behaviors)
- Extremely poor study habits
- Very few academic skill deficiencies and learning disabilities

This realization on the part of the LAC staff constituted the third major

revision of the program as staff members searched for new means of helping these students.

The fourth and fifth revisions keyed on the special academic advising sessions designed for these students. Initially, they were briefly advised in a large group. The major topics covered were conditions of the contract and some references to campus support agencies. Several semesters followed with only minimal increases in the successful completion ratios. It became obvious to the LAC staff that some of the underlying reasons for students failing to meet the conditions of their contracts stemmed from the initial choice of courses and the resulting schedule. Therefore, the staff redesigned the advising session to include the use of small groups; usually six students to one staff member. While this structure was more useful, it was evident that some students were hostile and unresponsive to the session; so again, the advising session was revised.

The probation transfer students were assembled in a large group meeting, which the LAC director opened with brief statements regarding the philosophy of the probation transfer program and the statistical results. The meeting was then turned over to a group of ex-probation transfer students, all of whom were successfully enjoying college. They recounted personal experiences and employed confrontative techniques to reach and motivate the new students. The tone of this part of the session was indicative of a revival tent or an A.A. meeting. After 20-30 minutes, the students were divided into small groups for academic advising. The LAC staff members, aided by the probation transfer volunteers and equipped with complete transcripts showing the often checkered past of these new students, conducted the groups. A marked change was immediately evident as the new students were agreeable, cooperative, and enthusiastic about the program.

To insure that the probation transfer students obtained the negotiated schedule of classes, the staff members were authorized to final check each student's schedule before registration fees could be paid.

LAC programs

At the start of the semester, each probation transfer student became involved in one of three distinctly different programs offered by the LAC. The first program was a three hour elective credit course in psychology stressing the acquisition of learning strategies and including a heavy emphasis on self management techniques. This course, taught by the staff, provided a powerful structure through which a student could learn to control his academic destiny. In recent semesters, the instructional staff has made special efforts to work closely with these probation transfer students.

The second program involved individualized study in the LAC lab under the supervision of paraprofessional counselors. Such work usually concentrated on study skills improvement.

The third program, Academic Improvement Groups patterned after the model built by Dr. Sue Johnson-Davidson (1), was the latest addition to the

list of options. AIG's were designed to help students focus on academic problem areas, learn techniques to develop skills to overcome the problems, recognize how these skills transfer to other problem areas, practice applying the techniques, and continue developing skills throughout the academic year.

By the end of Fall 1979, it became obvious that students choosing the credit program were far more successful in meeting the conditions of their contracts than those choosing the non-credit program (see Table 1 and Table 2). In an effort to eliminate this inequity, the LAC is currently devoting the efforts of one senior psychology intern (an ex-probation transfer student herself) to counsel with and supervise the students in this program, both credit and non-credit. This intern is available for walk-in conferences, and she also has two scheduled appointments with each student during the semester. The results of this revision are as yet unknown.

Projected revisions

The LAC staff recently became aware that probation transfer students required to make a GPA greater than 3.00 were suffering extremely high stress levels. For these students the contract seemed to be punitive, not motivating. Therefore, the staff has recommended that the ceiling of 2.75 be utilized on the contract no matter what the entering GPA and the number of hours.

Statistical results

Since this report is merely descriptive, not a formal experimental design, it is appropriate to be extremely cautious in interpreting any results. No one knows the acceptable level of success, and many students who fail to complete their contracts achieve outstanding improvements in self-awareness and decision-making. For many of those "failures," the contract forces them to the realization that college is an inappropriate choice for them, at least at this time.

When looking at the data presented in Table 1, the LAC staff believes the revisions cited earlier account for the marked increase in the number of students meeting the conditions of their contracts. From Fall 1976 to Fall 1979, the increase from 39% to 62.9% is probably not due to chance.

The other general trend is the higher success rate of students choosing the credit rather than the non-credit program. The increase in the number of students in the credit program who successfully complete their contracts may be explained by the extra attention the instructional staff now gives them or be a factor of the type of student choosing the credit program.

The most important statistical result not reflected in the tables is the bipolar distribution of the students' GPA's. In some cases the old behaviors of class cutting and procrastination recur. Interestingly, the most confident even arrogant students at the advising sessions usually end up with a GPA of less than 1.00.

TABLE 1
Results From Probation Transfer Program

Total N = 626	% students choosing	% students meeting contract	Total % students meeting contract
Fall 1976 (N = 74)	N/A	39	39
Spring 1977 (N = 59)	N/A	45	45
Fall 1977 (N = 105)	N/A	48	48
Spring 1978 (N = 80)	class 43 lab 57	54 43	51
Summer 1978 (N = 11)	N/A	72.7	72.7
Fall 1978 (N = 112)	class 41 lab 59	58.5 55	57
Spring 1979 (N = 22)	class 66 lab 34	69.7 23.5	51
Summer 1979 (N = 22)	N/A	59	59
Fall 1979 (N = 108)	class 61 lab 39	76.5 39	62.9

TABLE 2
Summary of Average GPA of Students in
Probation Transfer Program and Relationship of
Number of Hours and Completion of Contract

• Average GPA of students meeting conditions of contract	2.94
• Average GPA range of students meeting conditions of contract	2.09 - 4.00
• Average GPA of students not meeting conditions of contract	1.58
• Average GPA range of students not meeting conditions of contract	.49 - 2.70
• No relationship found between number of hours transferred and success in meeting conditions of contract.	

On the other end of the scale, many students score GPA's above 3.00 and continue that level of performance through graduation (and graduate school). A follow-up study is planned.

Evaluation

While statistical results may yield interesting information, the really important feedback comes from the participants in the program in one of two ways: individual conferences or written, subjective evaluations. Many of the revisions have been a direct result of those evaluations.

The following list of questions is currently being used on the written evaluation.

1. What are your feelings about being labeled "probation transfer"? Include problems and assets you found associated with that title.
2. Evaluate the usefulness of the LAC special advising session you attended before registration. Include your reaction to the probation transfer volunteers and the course advising you received.
3. What will you be doing next semester if you fulfill your probation transfer contract?
4. What will you be doing next semester if you *do not* fulfill your probation transfer contract?
5. For future students entering under the probation transfer program, what improvements should be made to upgrade the quality of assistance?
6. Which option were you involved in?
 - Psy 1320
 - AIG
 - 15 hours work in the LAC lab

Answer the following questions *only* if you chose the 15 hours of work in the LAC lab.

7. How was the time you spent working in the LAC lab meaningful to you?
8. Would it have been helpful if your lab work had been more structured?

Summary

This experimental program has two basic premises. First, some transfer students with low, even disastrous, GPA's can and should be academically successful. Second, if these students are indeed given "a last chance," then that chance should include more than an opportunity to register for classes. Some real efforts to help the student unearth the reasons for his past failures and build new methods for successful academic experiences should be made.

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EFFECTS OF PEER TUTORING ON ACADEMIC ACHIEVEMENT AND AFFECTIVE ADJUSTMENT

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Learning assistance centers have been developed and implemented in order to facilitate student learning at the college level. According to Devirian (3), learning assistance centers have become the eclectic support, delivery, and referral service for students, faculty, and administrators in institutions of higher learning. Enright (4:81) conceptualized a learning center as a "place concerned with learning environments functioning to enable students to learn more in less time and with greater ease, offering tutorial help..."

Tutorial programs and study skills programs are offering adjunct learning environments to the traditional learning methods (11). Individualized content subject tutoring through learning centers is an outreach to academic departments (7). Successful tutoring programs allude to the importance of the cognitive process as well as the affective process in learning situations (6). Cognitive achievement is generally understood in the forms of grade improvement after tutoring, skills therapy, or study skills techniques (1,5). Affective adjustment is generally not understood or researched in learning center situations. However, studies have alluded to the influence of affective adjustment in the form of attitudes, affective skills, self-concept, and expectations (1,2,10).

The present study investigated the academic achievement and the affective adjustment component of a learning center peer tutoring situation. It was hypothesized that those students receiving tutoring would demonstrate greater academic achievement and affective adjustment in comparison to those students not receiving tutoring.

Method

Subjects

The subjects were 150 California State College, San Bernardino students enrolled in statistics Winter Quarter, 1979. There were 79 females and 71

males distributed among the class levels as follows: 39 freshmen, 31 sophomores, 38 juniors, and 42 seniors. Only subjects interested in receiving tutoring were used in this study. Subjects were divided into three groups according to their previous academic records. There were 50 subjects in each group: low GPA group (< 2.35); medium GPA group ($\geq 2.35 < 3.33$); and high GPA group (≥ 3.33). One half (25) of the subjects in each group were randomly assigned to the experimental tutoring condition.

Tutors

Those students selected as tutors were required to have a minimum of a "B" average (3.0 GPA) in the course(s) to be tutored. Tutors had a background in the subject to be tutored and good listening and communication skills. A faculty recommendation was necessary for each tutor. All tutors were paid \$2.90 per hour.

Tutoring

Each tutee received a minimum of 3 hours and a maximum of 5 hours of tutoring per week for the 10 week quarter. Each tutoring session was constructed to meet the individual requirements of the tutee. The typical deficiencies included a lack of mathematical background, a negative attitude toward mathematics or statistics, math and/or test anxiety, poor study skills, and lack of test taking strategies.

Instrumentation

The *Profile of Mood States* (POMS) (8,9) is a semantic differential instrument comprised of 65 statement yielding 6 scores: tension, depression, anger, vigor, fatigue, and confusion. A Total Mood Disturbance (TMD) score is obtained by adding the scores across the 6 factors, weighing vigor negatively. Test-retest reliability is .74 and internal consistency is .90.

Procedure

During the first week of the quarter, the POMS questionnaire was disseminated to all students in introductory statistics. Students (tutees), tutors, and professors were told that this was a study of attitudes toward statistics. No one was told about the learning center involvement. The professors teaching these courses had similar teaching methods and used the same grading system of A = 100-90%, B = 39-80%, C = 79-70%, D = 69-60%, F = 59-0%. During the tenth week of the quarter and prior to final examinations, subjects were re-administered the POMS.

Results

Analysis of the data for the low GPA group utilizing the student's *t* statistic demonstrated that those students receiving tutoring earned significantly higher final grades in statistics than did those not receiving tutoring, $t(48) = 2.702, p < .01$. Similarly, the data for both the medium and high

GPA groups indicated that those students receiving tutoring did significantly better in comparison to non-tutored students, $t(48) = 2.441, p < .01$; $t(48) = 2.641, p < .01$, respectively.

The difference between the pretest and posttest *POMS-TMD* scores was tested with the student's t statistic for all groups. The analysis for the low GPA group revealed that tutored students significantly reduced their *POMS-TMD* scores in comparison to non-tutored students, $t(48) = -2.712, p < .01$. In addition, data for the medium and high GPA groups yielded significant reductions in *POMS-TMD* scores for tutored students in comparison to non-tutored students, $t(48) = -2.616, p < .01$; $t(48) = -2.001, p < .05$, respectively.

Discussion

These findings demonstrate that peer tutoring within a learning center environment is a support service to academia for students with various grade point averages in both the academic and the affective domains. By assisting students from all levels of academic achievement, the learning center has become systematically integrated into the total campus community. The learning center is not a panacea for all students with all problems, but the center can assist students with many difficulties and act as a referral center contingent upon specific problems.

There are certain limitations with this research. Even though the teaching style and course content were similar, the instructors themselves could have contributed to the results. This effect was minimized by using students from each course in both the experimental and control groups. The pretest-posttest design could have had a historical confounding effect. However, the same influence would have been produced in both the pretest-posttest experimental and control groups.

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SELF-ANALYSIS AND COMPUTER ANALYSIS OF THE MINNESOTA STUDY HABITS BLANK

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The purpose of this paper is to describe a new version of the *Minnesota Study Habits Blank*, an update of the instrument as published by the University of Minnesota in 1965. The basic instrument is the same. The new version involves two new methods of scoring and presenting the results to students, teachers, and counselors. It allows for immediate self-scoring and profiling by a student in one form, and a more complete scoring, profiling, and interpretation by computer in the other form.

The development of the earlier version of the *MSHB* took place over a six to eight year period preceding publication in 1965. That process is described in some detail in the *Technical Information Bulletin* available from Twin Oaks Publishing, Inc, the publisher of the new forms. A very brief description of that development is presented here.

Development of the instrument

Original item pool

The original item pool was made up using statements by students in a how to study class. They were asked to write twenty statements about their studying. About 500 such statements were collected. After taking out duplications and inappropriate responses, the original item pool stood at approximately 200 items. From those 200 items, 75 items were selected for the first tryout instrument.

Several item analyses were performed on the initial 75 items. The results were tabulated and the items which had not cross-validated on as many as three item analyses were dropped and substitutions were made for them. At that time the instrument was extended to 100 items. Again several item analyses were done using college grades as the criterion. The instrument was first reduced by taking out the items which seemed not to be working and additional items were added to bring it up to the current 150

item length. The last revision took place in 1965. The original item pool had been collected in 1959.

The 150 items in the final item pool were then subjected to item selection techniques and various clustering techniques.

Development of sub-scales

The 150 item pool was sorted independently by two reading and study skills specialists, including the author, by placing together the items which seemed to be measuring the same general content. This intuitive analysis was then compared with the results of an independent cluster analysis, using a 150 item intercorrelation matrix subjected to the B-Coefficient analysis by Tryon. (4)

The 150 item intercorrelation matrix was also factored using Thurston's centroid method. (3) The results of the intuitive analysis, the cluster analysis and the factor analysis were roughly parallel, that is, not more than 3 or 4 items changed clusters across methods. The resulting clusters were then factor analyzed to determine the internal structure of the scales.

The clusters of items now used in the test resulted from item selection using factor loadings on the above population together with a factor analysis of the items within the scales on a new population. Three criteria were used in selecting items to be incorporated into the final clusters: (1) high factor loadings on both analyses within scales, (2) a significant correlation with grades on the latter population, and (3) reasonable discrimination and difficulty indices on both populations.

The item clusters were then tested on another new population by comparing the average intercorrelations among items within clusters with the average correlations of the items in the whole matrix. This was designed to demonstrate that the clusters were in fact clusters of items in a population completely independent of that on which they were selected.

Reliability and validity

The reliability of the total scale and the reduced scale using only the 55 problem indicator items was examined using samples of high school and college students. (1,2) Reliability coefficients (KR-20) ranged from .92 to .95. The reliability of the sub-scales was considerably lower, ranging from .61 to .64.

Validity studies were conducted to determine the relationship to grades in high school and college. High school grade predictions were impressive, ranging from .35 to .56, with a median at about .45. However, college grade predictions were much lower, suggesting that the instrument is not a good predictor of college grades. Its primary use should be in counseling, not prediction, placement, or admission.

The most interesting validity data came in comparisons with personality tests. For example, on the "Reality" scale of the Minnesota Counseling Inventory, a score which presumes to identify serious emotional problems,

the *MSHB* "Possible Emotional Problems" subscale showed a correlation of .63, very high, and close to the limits of reliability on both scales.

A comparison with the Brown-Holtzman, *Survey of Study Habits and Attitudes*, showed a correlation of .93 between the total scores on the two instruments.

The new version of the MSHB

Description

The *Minnesota Study Habits Blank* (MSHB) is designed to assist teachers, advisors, and counselors working with students on study habits, attitudes, and basic skills.

It provides useful information for direct exploration of study habits, basic skills, and attitudes. It also can be used to indicate and facilitate referrals to sources of assistance.

The instrument has been carefully developed to relate to those aspects of a student's behavior which promote successful school performance. The correlation between the *MSHB* raw score and school grades is not very high. Therefore, it is strongly recommended that the questionnaire's total score not be used to make decisions or to draw conclusions about an individual student's probable school performance.

The *MSHB* adds significantly to prediction of grades when used with other predictors such as ability scores and previous performance. It also predicts better at the high school level than at the college level, probably because study habits, basic skills, and attitudes are more influential in high school performance, where grades may be less dependent upon ability than on interest and application.

Two different scoring systems

Results of the *MSHB* are available in the form of a computer-generated individual profile and interpretation from the scannable instrument, and in the form of a self-analysis from which the student or counselor can obtain immediate feedback using a self-scoring answer sheet and a constructed individual profile.

Computer-generated scoring results

When computer-generated scoring results are desired, the student will respond to the items on the specially-designed scannable form. (The Self-Analysis Form may not be used to obtain the computer-generated profile.) Scannable answer sheets are sent in for scoring to the Twin Oaks Processing Center.

The scoring center will send two copies of a computer printout to the sender, one for the student and one for the teacher or counselor. The computer printout provides the student and the instructor (or counselor) with several types of information:

1. A profile of the student's responses to the 55 items that constitute "Problem Indicators."
2. A printout of items under the categories listed in the profile. These are actual "wrong" responses made by the student. Items printed out are those which were selected as Problem Indicators; these items repeatedly showed significant differences between pairs of successful and unsuccessful students of equal measured academic aptitude.
3. A general interpretive statement. This short paragraph tells whether the student compiled more or less than the average number of Problem Indicators in each of the two major categories. The statements suggest referral in appropriate situations.
4. The specific problem areas are indicated. The printout lists specific areas mentioned in items that indicate a need for attention. These are problem areas that may be explored with a teacher or counselor. An example of the computer printout appears at the end of this paper.

Self-analysis scoring results

The self-analysis of study habits and skills is completed by the student on a self-scoring answer sheet. After the student responds to the *MSHB*, the answer sheet is opened, revealing the items which may indicate problems for the student. A profile is constructed using directions contained in the self-analysis forms, and, finally, the student is given a general interpretation of the results.

In both forms of the results, items on the *MSHB* are divided into categories of Problem Indicators. There are two major categories:

1. Reading and study skills, further subdivided into problems relating to exams, time scheduling, note taking, and basic skills.
2. Possible personal problems, further subdivided into organization of study effort, concentration/distraction, motivation/attitudes/goals, and possible emotional problems.

Hand scoring of scannable answer sheets

Hand scoring is not recommended for the questionnaire because it results simply in a single numerical score—unless a rather complex scoring system is used, which results in category subscores. The user is cautioned that a single score on the instrument does not provide a very reliable or valid predictor of academic achievement. The primary use of the instrument should be as a counseling tool rather than as a predictive device.

Timing and time studies

There are no time limits for the questionnaire. It is best to allow about 25 minutes for completion of the questionnaire by the slowest students. There may be a few unusual students who will not finish in that time but more than 95 percent of all students taking the *MSHB* will finish within 25 minutes. In

[illegible]

one time study in high school, 118 students took the questionnaire and 115 of them were finished within 20 minutes. Three students took more than 20 minutes and one of them took as long as 29 minutes.

In a time study at the University of Minnesota in the General College Freshman Orientation Program, 121 students completed the instrument in a mean time of 18.2 minutes. Ninety percent of them were finished in 22 minutes. All but two students were finished in 27 minutes.

Referral and counseling

The breakdown of items on the *MSHB* make it easy for both the professional and the student to see the problem or problems clearly, and to make decisions about appropriate actions. If, for example, the student has indicated problems in the Basic Skills area, a referral to a learning center, reading and study skills center, remedial program, or other skill-related source of help should be made. If, on the other hand, the student's responses indicate personal problems that may be interfering with performance, a referral to counseling services should be made.

The use of students' own statements as content for a discussion of referral makes it much easier for the professional person to make the referral. Since the content of the student responses is immediately available to the counselor or advisor, it is easy to direct the counseling interview into topics of appropriate concern. In this way, the counselor does not have to wait for the student to get around to (or become ready for) discussion of problem areas.

Technical data

The *MSHB* was developed over a period of seven years, using data from high school and college students. The *Technical Information Bulletin* shows clearly the technical quality of the instrument, with data indicating:

1. Correlations between the 55 scored items and the full scale.
2. Intercorrelations between items and subscales.
3. Reliability on high school and college students.
4. Predictive validity for high school and college students.
5. Concurrent validity with other tests, including personality tests.
6. Comparison of scores on various populations.

In addition, the *Bulletin* provides keys and normative data on high school and college students, separately by sex.

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AN EVALUATION OF THE EFFECTIVENESS OF A COURSE OFFERED AT A LEARNING ASSISTANCE CENTER

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With the increasing development of Reading and Study Skills Programs (RSS) in universities throughout the United States comes a growing need for evaluation and accountability concerning their effectiveness. The major purpose of RSS programs is to improve the academic achievement of students according to Wilson (4) and Santeusanio (5), and to reduce the attrition rate among underprepared college students. Previous research indicates that RSS programs are probably beneficial and that study methods contribute to achievement (1,2,3). Anderson (1) states that although the state of the art in college reading program evaluation is still in its developmental stage it is recognized that the most obvious and defensible long range objective of RSS programs is the improvement of grade-point averages (GPA) with a modal GPA gain of .4 to .5. This is supported by Entwistle (2) who emphasizes that the only adequate criterion measure is GPA improvement in comparison to a control group.

Using this as a basis for RSS program evaluation, this study attempts to measure the success of the RSS course offered through the Center for Learning Assistance at New Mexico State University. The hypothesis is that students who successfully completed the RSS course in the Center for Learning Assistance (experimental) will show a greater increase in GPA from the pre-course semester to the post-course semester than the students who didn't take the course (control). This is based on the assumption that the results of the development of better study skills in the experimental group will be reflected in an increase in GPA. It is hoped that studies such as this will aid in determining the effectiveness (or noneffectiveness) of RSS programs.

Method

Measures

Measures considered are Grade Point Average—information is provided

by transcripts from the registrar at New Mexico State University. GPA's considered for both groups are those preceding the semester of treatment, those during the semester of treatment, and those following the semester of treatment. GPA's at NMSU are based on a four-point system; cumulative GPA's are not considered due to the minimized GPA change if the subject has had a large number of courses prior to treatment.

Subjects

The subjects consist of two groups: the experimental group consists of 33 students ranging from second semester freshmen to first semester seniors who successfully completed a study skills course titled *University 110* offered through the Center for Learning Assistance at New Mexico State University; the control group consists of an equal number of students enrolled at New Mexico State University who did not take the RSS course but who match the experimental group on college affiliation and academic status.

Analysis

Analysis of the data was performed utilizing correlated *t* tests to determine the significance of any changes. Analysis was conducted through the APL interactive computer system at the NMSU Computer Center.

Procedures

1. The study covers three semesters — 1.5 years.
2. The experimental group enrolled for the RSS course during regular registration at NMSU.
3. The control group was randomly selected but matched to the experimental group on college affiliation and academic classification.
4. First semester freshmen were excluded due to lack of pre-treatment data.
5. Second semester seniors were excluded due to lack of post-treatment data.
6. The course was taken for 1, 2, 3 credit hours—the requirement for each credit hour for which the student was enrolled was 15 hours work in a study skills area, one hour evaluation, and one-half hour program conference weekly with a personal learning facilitator who is a graduate assistant at NMSU and trained by the Center for Learning Assistance.
7. Study skills areas covered in treatment are:
 - Reading Comprehension
 - Efficient Reading Rate Development
 - Listening/Notetaking
 - Spelling
 - Writing a Research Term Paper
 - Textbook Reading Efficiency
 - Memory and Concentration
 - Time Management

Vocabulary Development
Writing: Grammar, Mechanics and Structure
Test Preparation and Test Taking

8. The students who took the course were graded on a pass/fail basis and received credit which applies to their degree program.
9. Students who failed the course were excluded from data analysis due to the idea that if they fail, treatment was unsuccessfully applied and of no use in evaluation.

Results

Mean GPA scores were higher for the control group than for the experimental group. The control group GPA's also demonstrated an average semester gain of about .06, where the experimental group experienced a .214 increase the semester of treatment with a slight drop the following semester. (See Table 1)

TABLE 1

Mean GPA Scores

	Pre-Semester	During Semester	Post-Semester
Experimental	2.124	2.338	2.334
Control	2.677	2.731	2.791

A *t* test for correlated measures comparing (1) pre-treatment GPA to semester-of-treatment GPA; (2) pre-treatment GPA to post-treatment GPA; and (3) semester-of-treatment GPA to post-treatment GPA for each group showed the results to be not significant: Control 1: ($t = 0.45$; $df = 43$; $p > .05$); Control 2: ($t = 0.94$; $df = 43$; $p > .05$); Control 3: ($t = 0.57$; $df = 43$; $p > .05$); Experimental 1: ($t = 1.33$; $df = 31$; $p > .05$); Experimental 2: ($t = 1.29$; $df = 31$; $p > .05$); Experimental 3: ($t = 0.03$; $df = 31$; $p > .05$).

Discussion

The results fail to support the hypothesis that the RSS course would increase students' GPA; gains in GPA for students enrolled in the course were not significantly different than those gains experienced by the group that did not take the course. This may be attributable to various factors: small sample size, lack of true random selection of experimental subjects, or GPA as an inadequate measure for RSS course effectiveness.

The pattern of the mean GPA gains, though small, was of interest. While the control group exhibited a steady gain through the three semesters, the experimental group only gained in GPA the semester they took the course. At

this point, it is impossible to state what this is attributable to, but we may begin to wonder if it is the type of student a RSS course attracts that needs to be evaluated and not the course itself.

It is evident that further evaluation is needed. Future studies could begin to look at intrinsic factors such as motivation and attitudes about school as well as GPA gains in determining the effectiveness of RSS courses.

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USING TESTING AND SELF-ASSESSMENT FOR BETTER ADVISING AND PLACEMENT

Carolyn A. Simonson and Carole J. Steadman
Tacoma Community College

Tacoma Community College has tried one placement testing program after another in its sixteen years of operation and has found each of them wanting until we adopted the *Comparative Guidance and Placement (CGP) Tests* from the Educational Testing Service three years ago. Self-scoring and covering the areas of Reading (35 questions, 25 minutes), English (40 questions, 25 minutes), and Math (Applied Arithmetic, Elementary Algebra, or Intermediate Algebra depending on the student's background), the test is easily administered. This test is *not* diagnostic, but it is helpful for placement when used in conjunction with our Self Assessment and Course Selection form developed in 1978 (with special thanks to El Centro College, Dallas, Texas) by our Dean of Students and Counseling Staff.

As a result of this new testing program, students are being advised into appropriate programs at the outset (with their own concurrence), and their success rate has improved. We have identified three placement levels for which Tacoma Community College provides programs: *Level 1* is remedial for students who read below the 9th grade level and score (raw) under 15 on the Reading test as well as below 18 on the English test. *Level 2* is developmental for students who score below the 12th grade level in reading and below 26 on the English Placement test. *Level 3* is college transfer level for students reading at the college level (26 or above on the English and Reading tests).

What makes our program different from many others is that the student fills out a self-assessment form which leads him to some conclusions about himself in the areas of Likes and Dislikes, Abilities, and High School Grades (in Reading, English, and Math respectively). He compares this information with his *CGP* test scores, and his faculty advisor then assists him in course selection.

If the discrepancy between the *CGP* score and the Personal Assessment score is great — for instance if the student rates himself as a 9 (Level 1) in Reading and his standardized score shows 27 (Level 3 or University Parallel),

LIKES & DISLIKES

Yes No

READING

- I like to read short stories and novels
- When I do my assignments in the library, I like to stay awhile and explore other books and journals
- I enjoy visiting the library
- I enjoy reading as a pleasant pastime
- When I read magazines (such as Sports Illustrated, Time, Ebony, Family Circle), I usually read one or more complete articles, rather than scanning and reading picture captions only
- I like to read directions rather than having someone explain them to me orally
- I like to purchase books for my own personal library
- I like to share what I have read with others

ENGLISH

- I enjoy writing poems, letters or stories
- I feel a sense of personal satisfaction and accomplishment when I write
- I would like to help organize a creative writing club
- I enjoy group discussions, buzz sessions, and/or brainstorming
- It is easy for me to see mistakes in the writing and speed of others
- I enjoy writing creatively
- I can follow the plot of a novel or drama without difficulty
- When studying, I use the dictionary to find the meanings of new words I discover

MATH

- I enjoy playing number games
- I like working mathematical puzzles or riddles
- I enjoy working with numbers
- Before building something or hanging a picture, I take careful measurements
- I look forward to enrolling in college math courses
- I enjoy helping others with math
- I enjoy mechanical or architectural drawing
- I like to figure out math problems

ABILITIES

Yes No

- | | |
|--|--------------------------|
| I remember most of what I read | ☐ |
| I can talk about what I read | ☐ |
| I am a fast reader | ☐ |
| I usually understand what I read the first time I read it | ☐ |
| I received high grades in high school courses which required extensive reading (such as literature, history, civics) | ☐ |
| I have read at least three complete books in the last year .. | ☐ |
| I usually understand directions after reading them just once .. | ☐ |
| I have an adequate vocabulary | ☐ |
| When I read, it is easy for me to concentrate | ☐ |

- | | |
|---|--------------------------|
| I can recognize parts of speech (verbs, prepositions, adjectives, etc.) | ☐ |
| I can organize a paragraph and I understand such things as proper beginning and ending of paragraphs, key and supporting sentences, transition, etc. | ☐ |
| I can recognize the parts of a sentence (phrases, clauses, subject, predicate, etc.) | ☐ |
| When English teachers in high school wrote comments on my papers, I usually understood those comments. | ☐ |
| My spelling and capitalization was better than the average in my high school classes. | ☐ |
| I have written for the school newspaper | ☐ |
| I have written poetry or short stories or articles on my own when it was not assigned in school | ☐ |
| I am able to use reference material effectively | ☐ |

- | | |
|--|--------------------------|
| I am generally a good math student | ☐ |
| I routinely balance my checkbook or know how to make my money last until the next payday | ☐ |
| I always know when I am given the correct change | ☐ |
| I can figure the 5% sales tax or a 15% tip | ☐ |
| I usually get the correct answer on a math problem the first time .. | ☐ |
| I do arithmetic functions well (add, subtract, multiply, divide, percent, decimals) | ☐ |
| I can determine the best buy of two items based on weight and price of each | ☐ |
| I believe that changing to the metric system will present very few problems to me | ☐ |

HIGH SCHOOL GRADES

I received a grade of A or B in the following courses in high school:

READING

U.S. History
World History
American Literature
English Literature

Yes No



I received a grade of A or B in the following courses in high school:

ENGLISH

Freshman English (9th grade)
Sophomore English (10th grade)
Junior English (11th grade)
Senior English (12th grade)



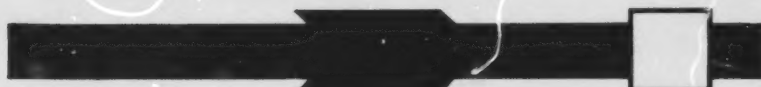
I received a grade of A or B in the following courses in high school:

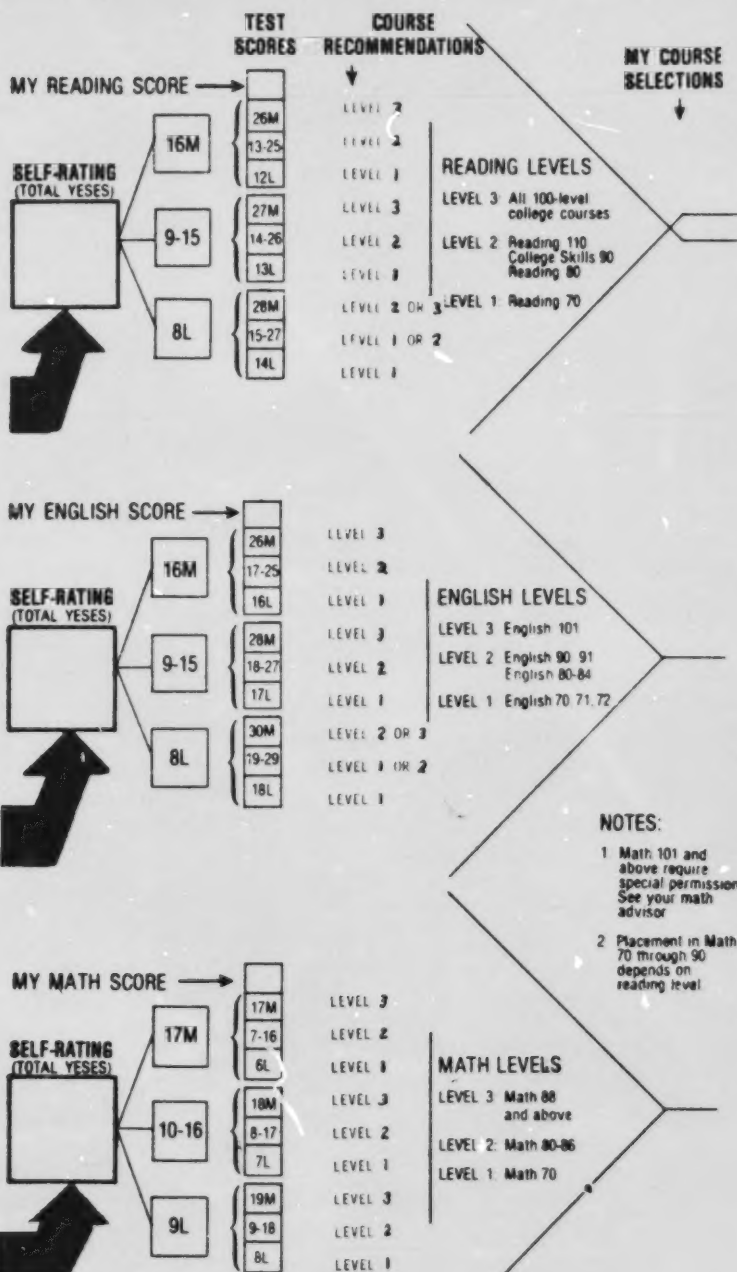
MATH

Algebra 1 (9th grade usually)
Algebra 2 (9th grade usually)
Geometry (10th grade usually)
Algebra 3 (11th grade usually)
Algebra 4 (11th grade usually)
Other Math:

YEAR
TAKEN

19	
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19	
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19	





we advise him to take a Level 2 (Developmental) class so that he can gain needed confidence. This certainly coincides with the generative theory of learning which says that a student's self-perception strongly determines his performance. If, indeed, the student perceives himself to be inadequate, he will not be able to perform up to his capacity, whatever it is.

Every entering student at Tacoma Community College does not take the *CGP*: (1) Non-matriculated students enrolling for one class a quarter are not tested; (2) Test-exempt students whose previous college transcripts or test scores indicate their readiness for university parallel work (transfer) are not tested; and (3) Part-time matriculated students who register for fewer than ten hours are given the Reading test only. However, we do manage to catch the majority of new students, and those who follow placement advice, generally succeed.

During the past three years, students have been given the option of seeing an advisor or being self-advised. Most choose the former, and of these we have kept records, particularly in English classes which are easy to correlate with the test scores. In English placement where the test results are borderline, the student is asked to write a paragraph, evaluated immediately by an English advisor, to confirm the student's placement. These results have been supported by a comparison between the *CGP* test results (raw score) and the *Nelson-Denny Reading* test (supplied by Professor Matthew Graber of New York City Community College) which provides graded reading level equivalencies for each *CGP* score from 1 to 35. Because the *Nelson-Denny* test is so widely standardized, it has helped to validate our cut-off points on the *CGP Test*.

Tacoma Community College
Level and Course Recommendation Form

Student's Name _____ Class _____

Date _____ Instructor _____ Adviser _____

Level of course work suggested for next quarter:

☐ Developmental/remedial (70's, 80's, 90's)

☐ University parallel (100+)

☐ Occupational/vocational (program interest: _____)

Class recommended for next quarter: _____

Comments: _____

Distribution: White — student; yellow — adviser;
pink — Dick Spangler, Building 8.

TCC-DE-001 (Rev. 1/79)

Most students are satisfied with the results of their placements following this dual testing/assessment process. Standardized exams may fail to convince, but in combination with students' own self-assessment, most students believe the results.

To supplement the original placement, we ask instructors at the remedial and developmental levels to fill out a Mid-Quarter Level and Course Recommendation Form (on sensitized paper: one copy to the student, one copy to the advisor, and one copy to the Developmental Coordinator).

Statistics from Winter, Spring, and Fall Quarters, 1979 show that for developmental students this follow-up advising is successful as the figures in Table 1 indicate, with success defined as a 2.0 GPA or better and completion of at least half of the credits attempted.

Table 1

	Winter 1979	Spring 1979	Fall 1979
Recommendation			
Followed	N = 325	N = 235	N = 172
Successful	74%	75%	76%
Unsuccessful	26%	24%	25%
Recommended for			
University Parallel	N = 142	N = 90	N = 73
Successful	78%	78%	89%
Unsuccessful	22%	22%	11%
Recommendation			
Not Followed	N = 59	N = 51	N = 25
Successful	39%	27%	40%
Unsuccessful	61%	73%	60%
Overall College			
Success Rate	76%	64%	69%

For Winter Quarter 1980, 88% (254 of 283 returning developmental and remedial students) followed the level and course recommendations. Of these, 43% were recommended to transfer to university parallel classes. The success rate cannot yet be determined because the figures are not in, but we are certain that this better ongoing advisement is improving our retention rate for developmental students.

Further examination of the Student Assessment Program conducted by Richard Spangler, Coordinator of Developmental Education, shows that during Winter Quarter, 1979, new student registration (306 new students out of

a possible 942) participated in the testing/assessment procedure. The remaining students (636) were either excused from the assessment or slipped by the screening process. The following table divides the students by "full-time" and "part-time" and shows their success related to initial placement. It is interesting to note that the success rate of both tested part-time and full-time students was 65% as shown in Table 2.

Table 2

Tested Students (306)
Winter 1979

Part Time (100)

Successful		Unsuccessful	
Placed Correctly	Placed Incorrectly	Placed Correctly	Placed Incorrectly
61%	4%	26%	9%

Full-time (206)

Successful		Unsuccessful	
Placed Correctly	Placed Incorrectly	Placed Correctly	Placed Incorrectly
62%	3%	20%	15%

Even though some students who were placed correctly were not successful, 87% of the part-time students and 82% of the full-time students were placed correctly by their advisers. A further examination of the records of those who were unsuccessful indicates that over 70% received either all W's, all E's (failure), or a mixture of both.

The testing results showed that 66% of those students who were tested (306) were considered developmental in at least one area. Of those tested, then, only 34% were considered above high school level according to test results. Approximately 80% of those who were considered developmental actually enrolled in one or more developmental courses.

The results show that the screening process is working. However, about one-third of the college's total student population registered for only one course and were therefore not considered for testing. For the majority of students at Tacoma Community College, however, testing and self-assessment, followed by careful advising and placement, has been successful.

THE RELATIONSHIP BETWEEN ORAL READING MISCUES AND COMPREHENSION: A STUDY OF DEVELOPMENTAL READING AT THE COLLEGE LEVEL

Christine C. Smith
California State University Northridge

Many students are seeking help in developing their reading comprehension abilities through the Learning Resource Centers in four-year colleges. At California State University, Northridge a survey of these students indicated that they come from two segments of the university population: one, the undergraduate who is seeking help in reading on a voluntary basis and two, the preservice teacher preparation student who is unable to meet the reading level proficiency requirement before admittance to student teaching. Also these students on an initial college level screening test scored below the 50th percentile in reading comprehension. Further, in a personal interview, conducted by the Reading Center staff housed in the Learning Resource Center, the students had felt the need to improve reading vocabulary and comprehension and that each student had at least a grade point average of a 'C'. This 'C' average would indicate the student's ability to process written language and ability to handle coursework successfully.

However, these students share a common reading profile with deficits in reading comprehension abilities. These reading deficits involve the cue systems of spoken and written language which the student has internalized over the years. These cue systems are: (a) graphic-phonetic, (b) syntactic, and (c) semantic. The mature fluent reader has internalized these systems and can unpack the surface and deep grammatical/syntactic structure for comprehending a written passage (7).

A search of the literature for studies on college level reading produced studies on testing anxiety, speed reading and program surveys, but little was available on the nature of reading comprehension or a systematic analysis of the difficulties the student encounters as he processes written language (2).

One study by Hoffner (5) did examine the oral reading behavior of five junior college students of below average reading proficiency. The *Reading Miscue Inventory* (RMI) (4) was used to analyze and compare the miscues they

generated while reading two selections varying in difficulty. Findings indicated that during more difficult reading grapho-phonemic cues were more closely attended to by all subjects and syntactic cues continued to function strongly, while semantic cues became so weak that many miscues, though grammatically correct, failed to reproduce the intended meaning of the text. Further research using the *RMI* with older readers of varying proficiency was suggested.

The purpose of the study

Since these students were seeking help for developing reading comprehension strategies in the Learning Resource Center, it was necessary for the reading staff to understand the use of the grapho-phonetic, syntactic and semantic cue systems these students were employing in the reading process while reading printed materials. Therefore, the purpose of this study was to explore the relationship between oral reading miscues (3) and comprehension.

Question for the study

What is the distribution of the percentage of the oral reading miscue categories at the word level, at the sentence level and their distributive effect on the retelling score and silent reading comprehension?

Methodology

Instrumentation. The miscue categories at the word level and the sentence level and the retelling score were measured by the *Reading Miscue Inventory: Short Form (RMI:SF)*, (4:15-29). Silent reading comprehension was measured by the *McGraw Hill Basic Skills System: Reading III (MHBS-S:RIII)*, (6). This score is a composite of several factors of comprehension.

Population. The population of this study was twenty seven (27) university students. These students had volunteered to attend a reading workshop for further evaluation of their reading performance. Each student needed further diagnosis and instruction in reading comprehension. Sixteen (16) of these students came from the undergraduate student body and had at least a 2.0 Grade Point Average and had received a score below the 50th percentile on a standardized reading test. Eleven (11) of the 27 students were in the preservice teacher education program. These students had at least a 2.5 grade point average, but had received a score below the 50th percentile on the *Nelson Denny Reading Test*.

Procedure

Each of the 27 university students was audio-taped as he read a 7½-page selection from *Fail Safe* (1). This story had a readability level determined by the Fry graph between the 11-12 grade level. Each student was asked to retell the story.

The *RMI:SF* was used to interpret and code the first 20 oral reading miscues at the *word level* in terms of the following categories: levels of graphic similarity, phonic similarity and degrees of grammatical function. The miscues were also interpreted at the *sentence level* in terms of the following categories: levels of syntactic acceptability, levels of semantic acceptability, and degrees of meaning change. The *retelling score* is an oral retelling of the story and a measure of the percent of material remembered based on the retelling format (4:24).

Data Processing and Analysis

A mean and standard deviation were computed for each of the 21 oral reading miscue categories of the word level and the sentence level and silent reading comprehension. The means of the 22 variables were used to analyze the question posed for the study.

Findings and discussion

Word Level

For the group as a whole, 53 percent of the miscues had high graphic correspondence with the print and 51.5 percent of the miscues had high phonic correspondence with the print. Some correspondence with the print fell at the 14 percent level for both categories. This would indicate that the group as a whole when making oral reading miscues had control of the grapho-phonic cue system of the language approximately 66 percent or two-thirds of the time.

Not all miscues on the word level fall in the grapho-phonic categories. Some words, although coded in graphic, phonic or grammatical function categories, are word substitutions that the reader made for the text. Each of these substitutions were analyzed in terms of grammatical function. For the group of 27 students, 64 percent of the substitutions had the same grammatical function and 14.3 percent of the substitutions were not the same grammatical function. This occurrence of 14.3 percent of unsatisfactory substitutions could interfere with comprehension on the sentence level.

On the word level, the 27 subjects attempted to correct only 32 percent of the miscues in all three categories. This would indicate that on the average only 6 out of every 20 miscues were corrected and might be a definite contributing factor in the students' poor comprehension score.

Sentence Level

The next step in the analysis of the miscues on the word level was to take a look at the effect of these miscues on language sense or the sentence level. Each sentence as it was finally produced with all the miscues was analyzed in terms of levels of syntactic acceptability, semantic acceptability and meaning change.

The group of 27 college students produced sentences which on the average were 90.7 percent syntactically correct or acceptable. With interpreta-

tion of meaning which went before and after in the passage, 59.4 percent of the sentences were semantically correct with 39.8 percent partially correct.

However in the meaning change category of interpretation, only 8 percent of the meaning of the author was retained and 42.6 percent of the meaning was partially retained, with 49.4 percent of the meaning being lost. Combining both the 8 percent and the 42.6 percent levels of meaning change would give a mixed meaning or comprehension score involving the syntactic and semantic cue systems as 50.6 percent comprehension of the intended meaning of the author.

An interpretation of the semantic score of 59.4 percent in relationship to the meaning change score of 8 percent could be that readers do attempt to reconstruct meaning from the material which is being read. The reconstruction may not and often does not correspond with the intended meaning of the author. It is the partial meaning change score of 42.6 percent which is essential to reconstruction of meaning.

With reference to the relationship between meaning change and the retelling score, the mixed meaning change of 50.6 percent of the intended meaning of the author when compared with the retelling score of 59.8 percent of the material read would indicate that the group of 27 students as a whole is making *some effective use* of reading strategies (4:117). The meaning change loss score falls between 20 and 70 percent and the retelling score falls in the range of 20 to 60 percent.

For a measure of silent reading comprehension on a standardized test, the group of 27 students recalled 56 percent of the material read on the *MHBSS:RIII*. This was in a timed situation of 40 minutes using a multiple choice format. On the average, the group answered 17 out of 30 questions correctly.

On all three measures of comprehension, the 27 students retained, on the average, between 50.6 percent and 59.8 percent of material read. This investigation of the reading process involving the cue systems at the word level and the sentence level gives a picture of these college students giving intense inspection of the print.

Summary of the findings

The findings of this study have given a reading profile of a group of college students who are making *some effective use* of reading strategies, enough at least, to maintain at least a 'C' grade point average. The discussion of the word level analysis and the sentence level analysis of the oral reading miscue categories offers some explanations why this group of students score below the 50th percentile on a standardized reading test.

First, these students are giving very close attention to each word as it appears in both oral reading and silent reading. The attention given to the grapho-phonetic and grammatical functions of individual words interferes negatively with the language sense of the print at the sentence level and therefore interferes with comprehension. This interference occurs with comprehension in terms of the meaning change at the sentence level and the

retelling score on the *RMI:SF* as well as the silent reading comprehension score on the *MHBSS:RIII*. These students, however, in a 4-year college academic program can obtain enough information from the text plus previous experience to maintain a 'C' Grade Point Average.

Second, these students may be reading the print too slowly to gain accurate comprehension of what they have read. Intense inspection of words in terms of the grapho-phonetic and grammatical functions does appear to negatively interfere with comprehension in the informal setting of the administration of an *RMI:SF*. In this setting, the students may take as much time as they wish to finish the task. The standardized *MHBSS:RIII* does have a time limit of 40 minutes. Since this intense inspection of words occurs on an informal test, it follows that in a timed setting the intense inspection would still occur. Thus, even though the student may finish the test questions, he may still be on the word level of analysis and just gaining enough information to understand 56 percent of the material read, but still falling below the 50th percentile.

Third, the students may not have had experience with the various grammatical and syntactical forms which they are reading. This experience is built up over the years through wide reading, frequent writing and interactive speaking activities. Wide reading and involvement with ideas, concepts and interaction with others provide the background for comprehension. Comprehension of any material is based on previous experience or prior background knowledge of the subject which provides the bridge to the understanding of new related material (7).

These three characteristics of these 27 college students could well be the basis for developing a college level reading course, the components of which would address these same characteristics.

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SUMMER ACCEPTANCE PROGRAM: A VIABLE OPTION FOR PROVISIONAL STUDENTS ENTERING A PRIVATE UNIVERSITY

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Do high potential students with an uneven academic preparation belong in private universities? What measures can private universities that want to admit these provisional students take to ensure their success? What are these provisional students' chances for success in highly competitive academic environments? These are but a few questions that will be addressed in this paper.

After intensive deliberation, St. Mary's University's administration affirmed that there was, indeed a place for provisional students to pursue their education in a private, Catholic university. The private universities' characteristics that lend themselves to facilitating the provisional students' potential for success include smaller teacher-student ratios, positive community atmosphere on campus and peer group support.

St. Mary's University of San Antonio is a private coeducational institution founded by the Catholic teaching order of Brothers of Mary. It is located in the heart of Southwest Texas, in a city which boasts a large junior district, a growing state university and medical school, and four private colleges.

Total enrollment at St. Mary's in the Fall of 1979 was 3,374 including the graduate school and law school. Hispanics represent 31% of the enrollment and blacks make up 4%. The incoming freshmen numbered 335, of which 103 were considered provisional freshmen. The 1979 figures are representative of previous years.

Far from being an "open admissions" college, St. Mary's criteria for admissions is a 19 composite on the ACT and a rank of upper half of the graduating class, or 900 on the SAT and a rank of upper half of the graduating class.

Using Advanced Institutional Development Program Federal grant monies, St. Mary's University established the Special Acceptance Program in 1974. The program was implemented and was subsequently broadened, to directly assist provisional students to improve their chances for academic

success. In the original Summer Program, provisional students were required to enroll in an English and in an Academic Skills course to comply with admissions policies. This program was broadened in 1975 to include a comprehensive counseling component for participants.

Special Acceptance Program participants are identified and selected by the Office of Admissions. The program participants are identified as having academic potential, as evidenced by their overall high school performance, but as students who need a summer head start in order to optimize their successful transition into a university setting. Although ranked in the top half of their graduating classes, the Special Acceptance students typically perform below average in their entrance test results. Their entrance test results range between a 13-18 in the ACT composite score, or between 740-895 in the SAT composite score. Students who perform well in their entrance tests results (19 and above for ACT, 900 and above for SAT), but who perform below average (C minus, D plus) in their high school programs, are also selected by our Admissions Office to participate in the Special Acceptance Program.

The thrust of the Special Acceptance Program is threefold. First, the program is designed to assist provisional students to improve their chances for academic success by providing them with academic skills assistance. This component attempts to upgrade the participants' reading level to 13th grade and above and to improve their reading comprehension to 80% level by the completion of the five-week summer program. Secondly, the program is designed to assist provisional students to improve their retention to an 85% level during their first semester, a high-attrition time for provisional students. This is attempted with the implementation of a comprehensive counseling program including a College Orientation/Career Development group. This group provides the students with academic, career and personal support assistance. The third and final thrust of the Special Acceptance Program is to prepare provisional students to compete in a university environment by requiring them to successfully complete a regular, three-hour freshman English course during that same summer term.

Incidentally, the personnel from each component, including the admissions staff, meet regularly to assess the provisional students' progress and to deal with problem areas.

Successful completion of the three-hour English course, the non-credit Academic Skills course, and the College Orientation Career Development Counseling Group components entitles provisional students to regular acceptance at St. Mary's University in the fall semester immediately following the summer program. These Special Acceptance program participants who enroll at St. Mary's University, after successfully completing the Summer Program, are required to limit their course selection to 12 hours this first semester. The students are also encouraged to meet with the program counselor at least three times during the first term. Long-term counseling follow-up is conducted on a basis of need or request.

Students who do not complete the Special Acceptance Program and are consequently not permitted to enroll at St. Mary's University the following term, receive supportive counseling services to assist them to clarify their educational directions. These students are encouraged to attend a junior college so that they can strengthen their academic background. They are encouraged to re-apply to St. Mary's University after they have mastered basic skills. This recommendation is based on the premise that these students will have a better chance to succeed in a junior college that offers a wide range of preparatory courses and that a junior college experience will enhance these students' self confidence and basic skills.

The Academic Skills component is a three-hour non-credit course designed to improve reading comprehension, speed, and study skills.

Reading instruction is developmental rather than remedial and concentrates on the patterns of non-fiction communication and reasoning ability. Students gain practice in transferring these skills to writing, thus reinforcing textbook notetaking.

In addition to techniques and practice in taking lecture notes, students are introduced to learning theory and its application to college courses. Time management, listening skills, memorization principles and test taking strategies are studied and practiced.

Those students needing remedial assistance in the basic skills meet on an individual basis after class with the instructor to correct these deficiencies before the fall semester.

Students take regular quizzes on the study skills material and are required to write two essays on related topics. Additionally, the student is observed for motivation, seriousness of intent and maturity for university challenges. Therefore, the Pass/No Pass grade is both objective and subjective.

In the College Orientation and Career Awareness Group, the students receive information about University policies, academic programs, and degree plan options. Activities are conducted to help them focus on career alternatives. Lectures are conducted in the areas of problem solving, goal setting, and decision making styles. Students become informed about student services such as testing, placement, and library facilities from members of the university community. The students also receive valuable information about college life from former program participants in the Orientation group.

In addition to the structured group component, all group participants receive individual counseling services designed to help them clarify their personal concerns and develop their course plans. In order to optimize student academic success, and thereby improve their retention, students are encouraged to select courses within their degree plan that correlate with their skills and abilities. Students whose grades show a deficiency in an area are advised to remedy the deficiency by taking a refresher course before enrolling for the credit course.

The English component is taught by St. Mary's University English

faculty, and the program participants are required to adhere to all the freshman English course requirements. Successful completion (C or above) of five, five hundred word themes, and the completion of a five hundred word theme as a final exam, are mandatory. The English faculty is instrumental in effecting the students' academic success by providing the students with individualized assistance, by giving them daily feedback, and, just as importantly, by providing them with encouragement and moral support. The faculty's contribution can be illustrated in numerous ways. A typical example is one where a student who enters the English course, feeling inadequate and negative, completes the English course with improved writing skills and with a new-found confidence in his overall academic potential.

The Special Acceptance Longitudinal Study was conducted to ascertain the degree of success that the program participants achieved at St. Mary's University. The key factors that were examined in this study included the participants high school grade point averages, their high school rank, and their ACT composite scores. Performance and retention profiles of the program participants were also ascertained in this study.

Before discussing the study results, let's review a demographic overview of the program participants. A total of 363 students participated in the Special Acceptance Program between 1974 and 1978. Data from these 363 students was used for this study. Although data for the 1979 program participants was not part of the original study, these students' Fall 1979 grade point average distributions, and their current retention are included in this report.

Of the 363 students who were part of this study, 202, or 56%, were male; 160, or 44%, were female. The ethnic background of the group showed that 220, or 60.6%, were Mexican Americans; 90, or 24.8%, were Anglo; 31, or 8.5% were Black; 22, or 6.1%, were from other ethnic backgrounds. The data further showed that 205, or 56.5%, of the students had graduated from public high schools; 104, 28.7%, had graduated from private high schools; for 54, or 14.9%, of the students, this information was not available.

The program participants' high school GPA median was 2.61. Black participants had a median high school GPA of 2.80; Mexican American participants had a median high school GPA of 2.70; while the Anglo participants had a median high school GPA of 2.50. Public high school participants had a median GPA of 2.80, while private high school program participants had a median GPA of 2.32.

The Special Acceptance participants' academic success at St. Mary's can be illustrated with this GPA profile table:

	1st Year GPA	2nd Year GPA	3rd Year GPA	4th Year GPA
Median	2.14	2.30	2.44	2.69
N	324	181	93	50

As noted in this GPA profile table, the program participants' GPAs increased on a yearly basis. Fifty program participants completed four years of studies at St. Mary's as of May 1979. Fifteen program participants will be graduating from St. Mary's in May 1980.

Even more indicative of the program participants success is a year-by-year retention profile. Of the 40 students who entered the program in 1974, nineteen, or 47.5%, of them completed four years of studies at St. Mary's. Thirty-two, or 40.5%, of the 79 students who entered the program in 1975 completed four years of studies at St. Mary's, while 28, or 43.8%, of the 64 students who entered the program in 1976 did likewise. The 1977 program had an enrollment of 100 students. Of that group 48, or 48%, are currently enrolled at St. Mary's. The 1978 program had an enrollment of 80 students. Forty-four, or 55%, of that group are currently enrolled at St. Mary's. The 1979 program had an enrollment of 103 students. Their first semester GPA profile showed that 72 or 70% of the students had earned between a 2.00 and a 4.00, 12 or 12% had earned between a 1.71 and 1.99 and 19 or 18% had been placed on probation. One hundred, or 97%, of the 1979 participants are presently completing their first year of studies at St. Mary's.

The participants' academic performance and retention profiles confirmed that the provisional students had succeeded academically at St. Mary's University. Another significant finding that was obtained in the study was in reference to the students' high school GPAs and their ACT composite scores. The finding showed that the participants' high school GPAs had a positive correlation with their college academic performance, while their ACT composite scores had a negative correlation with their college academic performance.

In concluding this paper, it seems appropriate to refer back to the three questions that were mentioned in the paper's opening. Can high potential students with uneven academic preparations survive in private universities? This question, like the others addressed in this paper, can only be answered by the institution's administration. The St. Mary's administration affirmed that provisional students belonged at St. Mary's. The administration's support has been essential to the program's growth and success.

The Special Acceptance Program was the alternative that St. Mary's selected to assist provisional students to optimize their transition into a university setting. University personnel who would like their administration to consider adopting a similar alternative should consider the following preliminary questions: Why is the program needed? What will the program cost? How can the program be funded? Who will benefit from the program? And what will the University gain by implementing the program?

The St. Mary's administration addressed these very questions six years ago. The administrators concluded that the program was needed for the following reasons: (a) the number of high potential students with uneven academic preparations seeking admittance to St. Mary's was increasing; (b) the enrollment competition with other area universities was increasing; and

finally (c) the retention of students at St. Mary's was decreasing. The Special Acceptance Program was thus implemented to offer students an opportunity to obtain an education while maintaining the rigorous academic standards of St. Mary's.

At St. Mary's the direct cost of the Special Acceptance Program has been minimal when compared to the revenue that it has produced. The academic skills component is self supporting as the students pay for the course, and as the course instructor also functions as the Director of the Pre-Degree Program, a revenue making program. The English faculty is paid with the course revenues, and therefore incur no direct costs, while the counseling position is paid with federal grant monies. Finally, the admissions staff is anxious to provide an option for provisional students as part of their regular recruitment effort.

St. Mary's sought, and subsequently obtained, funds from the federal government to cover program operating costs. Regarding the question of whom the program serves, at St. Mary's, the program serves the minority population.

St. Mary's has gained from the Special Acceptance Program in a variety of ways. The most significant area has been in St. Mary's accomplishing its mission, to serve the community.

READING COMPREHENSION OF NONSTANDARD DIALECT SPEAKERS IMPROVED BY THE USE OF LINGUISTIC PRINCIPLES

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Academic success of a student enrolled in an American college or university depends largely on his ability to communicate effectively in standard American English. Much of the student's ability to acquire proficient communication skills is contingent on how well he can comprehend material written in standard American English. Many experiments based on this assumption have been conducted in an effort to bridge the communication gap between speakers of standard and nonstandard American English. Most of the efforts have been concentrated on the early years of formal schooling; very little has been done at the college level. Therefore, Texas Southern University Reading and Study Skills Center may claim a place among the forerunners in helping college students who speak a nonstandard dialect develop competent communication and reading skills simultaneously.

The ethnic composition of the population at Texas Southern University makes nonstandard dialect speaking a very real problem. Each year the problem is compounded with increased enrollment of Negro, Mexican American, and international students from more than 50 countries. Since Negroes dominate the student enrollment, it was decided to work with their language problem first.

This investigation is an outgrowth of a pilot study conducted in 1971 (17). The study was designed to determine the effect that a highly linguistically based instructional program had on reading comprehension achievement of nonstandard dialect speakers at a predominantly Black university.

Objectives

The objectives for this investigation were two-fold. The primary objective was to determine the impact of highly linguistically based reading program on the comprehension achievement of Negro beginning freshmen

students at Texas Southern University when compared with other beginning freshmen students at the same institution who received reading instruction in a conventional mode (18).

The secondary objectives were (1) to determine whether the knowledge of language could be applied to raise the level of reading achievement of nonstandard dialect speaking college students as measured by the *Nelson-Denny Reading Tests*; (2) to develop and provide learning materials and techniques which nonstandard dialect speaking college students can use to understand (a) the interaction of language and thought, (b) how the reader uses language in comprehending what he reads, and (c) how the meaning of reading materials is reconstructed from the decoded language.

Related literature

The literature reviewed contained many divergent opinions as to how the problem of teaching reading to speakers of nonstandard English should be treated. Several alternatives were suggested. The most frequently suggested means of treating the problem of nonstandard English in the classroom were: (1) let the student read standard English in his own dialect (5); (2) teach standard English as a second language (13, 3, 1, 2, 10); (3) use a developmental rather than a remedial instructional approach to reading (15, 12, 9, 4, 11, 7); (4) adapt reading content to dialect (8); (5) teach the student to speak standard dialect before teaching him to read in standard English (14); and (6) accept dialect as a systematic language system common to a particular ethnic group (6).

Procedure

Subjects

Subjects were two hundred Negro, beginning freshmen students at Texas Southern University enrolled in eight sections of Basic Reading and Study Skills. Of the total, ninety-seven were male and 103 were female. The entire population was recent high school graduates who were reared and received their elementary and secondary school instruction in the Texas Gulf Coast Area. The subjects' ages ranged from seventeen through twenty years old.

The two hundred subjects were randomly selected from a total of 1024 freshmen admitted to the University in the Fall of 1978, 656 of whom enrolled in reading and study skills courses. The subjects were further randomly assigned to the experimental and control groups. After the groups were formed, they were arbitrarily called conventional and linguistics for instructional purposes.

Method

Two instructional approaches were employed in conducting the investigation. The approaches were as follows:

The Conventional Reading Approach. One group was taught by using conventional reading materials. The basic textbook was *Reading Skills Handbook* by Wiener and Bazerman (16). Each unit in the text was supplemented with readings and activities appropriate for the skills taught. The supplementary materials varied according to the students' interest and reading abilities.

The Linguistic Reading Approach. The other group received reading instruction based on linguistic principles set forth by Paul Roberts in *Patterns of English*, a linguistic reader, published by Harcourt, Brace and World, Inc. All practice exercises were developed within the guidelines specified in the manual which accompanies the text.

Each group received instruction over a sixteen-week period. The classes met for fifty minutes on alternate days twice per week during the investigation. The classes were so scheduled that whenever a conventional group met, a linguistics group met also.

Hypotheses

Three major hypotheses were tested during the investigation. Rejection level was set at the .01 level. The hypotheses were as follows:

Ho₁ — There is no statistically significant difference in posttest means for vocabulary, as measured by the *Nelson-Denny Reading Tests*, of the linguistics and conventional instructed groups.

Ha₁ — The group mean in vocabulary for the linguistics group will be significantly greater than the group mean in vocabulary for the conventional group.

Ho₂ — There is no statistically significant difference in posttest means for comprehension, as measured by the *Nelson-Denny Reading Tests*, of linguistics and conventional instructed groups.

Ha₂ — The group mean in comprehension for the linguistics group will be significantly greater than the group mean in comprehension for the conventional instructed group.

Ho₃ — There is no statistically significant difference in posttest means for total reading, a combined score for vocabulary and comprehension, as measured by the *Nelson-Denny Reading Tests*, of the linguistics and conventional instructed groups.

Ha₃ — The group mean in total reading for the linguistics group will be significantly greater than the group mean in total reading for the conventional instructed group.

Both the alternate hypotheses and the null hypotheses were tested using a one-way analysis of variance to determine change, if any.

Discussion

The main concern of the investigation was the comparison of mean change in reading grade equivalent scores of the linguistics and conventional groups. The amount of change in grade equivalent scores for each group was measured by the *Nelson-Denny Reading Tests, Forms C and D* respectively.

A comparison of pretest scores was made at the beginning of the investigation in order to determine the homogeneity of the groups. Table 1 shows the comparison of the pretest scores.

TABLE 1

Comparison of Pretest Total Reading Scores for
Conventional and Linguistics Instruction

Group	Pretest Vocabulary Group Mean	Pretest Comprehension Group Mean	Pretest Total Group Mean	Grade Equivalent
Conventional	12.0	17.4	29.4	7.7
Linguistics	11.5	17.4	28.9	7.7
Difference	.5	.0	.5	.0

The pretest scores showed the groups to be equally varied in reading achievement at the beginning of the investigation.

To test hypothesis number one and its alternate hypothesis, posttest raw score group means were compared. The raw score means were converted to grade equivalent scores in an effort to facilitate the ease of interpreting the results. Table 2 shows the results of the comparison.

TABLE 2

Comparison of Vocabulary Posttest Means

Group	N	Raw Score Group Mean	Grade Equivalent	Group Variance	SD
Conventional	100	23.84	10.5	80.66	8.98
Linguistics	100	22.77	10.2	78.94	8.88

The linguistics and conventional instructed groups both made measurable gains in vocabulary. Each group had a grade equivalent score of 8.3 at the beginning. The results show a grade equivalent gain score of 2.2 and 1.9 for the linguistics and conventional instructed groups respectively.

Table 3 shows the analysis of variance for vocabulary posttest means.

TABLE 3
Analysis of Variance for Vocabulary Posttest

Source	Sum of Squares	Mean Square	df	F-ratio
Between Groups	57.24	57.24	1	.717
Within Groups	15801.15	79.80	198	
Total	15858.39		199	

The difference between the two groups was not statistically significant when tested at the .01 confidence level. Therefore, the null hypothesis was not rejected.

Hypothesis number 2 and alternate hypothesis number 2 were tested by comparing the comprehension posttest group means for the linguistics and conventional instructed groups. Table 4 shows how the two group means compare with each other.

TABLE 4
Comparison of Comprehension Posttest Means
for Linguistically Based and Conventional Instruction

Group	N	Raw Score Group Mean	Grade Equivalent	Group Variance	SD
Conventional	100	21.17	8.2	74.70	8.64
Linguistics	100	27.70	10.0	55.54	7.45

The conventional instructed group only gained .8 of a grade while the linguistics instructed group gained an equivalence of two full grade levels. The difference of 1.8 between the two instructional groups was statistically significant at .01 confidence level when the scores were submitted to an analysis of variance. Table 5 shows the results of this analysis.

TABLE 5
Analysis of Variance for Comprehension Posttest Means

Source	Sum of Squares	Mean Square	df	F-ratio
Between Groups	2132.04	2132.04	1	32.73*
Within Groups	12895.11	65.12	198	
Total	15027.15		199	

* $p < .01$

The linguistically based instruction proved to be more effective than conventional instruction in improving reading comprehension of Negro college freshmen students from the Texas Gulf Coast Area. A 2.0 equivalent grade score gain when compared with .8 for the linguistics and conventional instructed groups, respectively, was statistically significant when tested at .01 confidence level. The null hypothesis was rejected because a change of 1.8 between the two instructional groups was significantly higher than the .01 confidence level.

Table 6 shows the comparison of pretest and posttest raw scores and their grade equivalent for the linguistics and conventional instructed groups.

TABLE 6
Amount of Change Between Pretest and Posttest
Total Grade Equivalent Scores Within
the Linguistics and Conventional Groups

	Pretest		Posttest		Grade Equivalent Group Mean Change
	Raw Score	Grade Equivalent	Raw Score	Grade Equivalent	
Conventional					
Vocabulary	12.0	8.3	23.8	10.5	2.2
Comprehension	17.4	7.0	21.7	8.6	1.6
Linguistics					
Vocabulary	11.5	8.3	22.7	10.2	1.9
Comprehension	17.4	7.0	22.7	10.0	3.0

Summary and conclusion

The present study was an extension of a previous study conducted by the author in 1973. The purpose of the study was to determine the effects an application of linguistic principles had on reading comprehension achievement of Negro beginning college freshmen students from the Texas Gulf Coast area when compared with other freshmen students who were instructed in a conventional mode. The results obtained show that the linguistically based instruction proved to be significantly more effective than conventional instruction in improving the reading comprehension of Negro college freshmen students.

On the basis of the findings of this study, it may be concluded that a reading program based on linguistic principles is more effective than conventional reading instruction in improving reading comprehension of Negro

college students who speak nonstandard American English. In addition, vocabulary improves simultaneously with improved comprehension.

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LEARNING ASSISTANCE APPROACHES FOR STUDY READING IN THE SCIENCES

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Learning assistance approaches for study reading can be valuable for helping students to learn more effectively in the science content areas. Hugue (10) notes that to achieve success in courses such as biology, chemistry and physics requires an understanding of basic concepts and theories, as well as of the assumptions, principles, and proofs used to derive the concepts. In order to achieve this understanding, several basic skills are necessary. Several authors (4,6,10) have identified these skills as the ability to explore a problem, observe, classify, suggest relationships, make predictions, and hypothesize. Furthermore, critical thinking in the sciences requires the ability to evaluate data in relation to the hypothesis and recognize faulty reasoning. Therefore, an effective study reading approach for the sciences should not merely stress the absorption of facts, but also the experimental processes used to discover them, and the way in which the facts relate to broader concepts. Methods are needed that will help students to study textbooks more effectively while at the same time build technical vocabulary and memory and concentration skills.

Essential to the reading of science textbooks is the ability to organize information. In order to help solve this difficulty, Adams (1) recommends that students analyze the organizational pattern of the text. Most scientific textbooks utilize a classification, process-description, factual-statement, problem-solving, or experiment-instruction pattern of organization. By analyzing these patterns, students are better prepared to recognize main ideas and locate significant facts. Another strategy which is widely used to assist students in textbook reading is the SQ3R method (14) which includes steps to survey, question, read, recite, and review information. Similarly, the OK5R method developed by Pauk (13) suggests that the student overview headings, identify key ideas, and then read, recite, and reflect. McPhail (12) likewise recommends that students preview, question, recite, annotate, and review their textbooks. All of these approaches are useful since they aid students in locating main ideas and concepts, as well as in retaining them.

However, the methods often have limited use with studying the sciences due to the large number of supporting details which must be learned along with the major concepts.

On the other hand, cognitive mapping (5,8) provides an alternative strategy by which main ideas and supportive details can be viewed as an integrated unit. The material is presented in the form of a diagram with the central idea of the passage as the starting point from which secondary categories and supporting details branch outward. The relationships between various segments of the material are thus established making the material more easily understood and remembered. Mapping by itself, however, may be insufficient to help students remember the technical or specialized vocabulary terms introduced in a unit. Problems or questions may also require greater elaboration than the diagram allows.

Because of the shortcomings of the already established reading methods, a two-column method has been derived which offers a textbook reading strategy, as well as mechanisms to build vocabulary and memory and concentration skills. Moreover, this approach for study reading science textbooks aids the student in developing goals for studying and in developing a systematic method to reach these goals. However, it should be noted that due to the large volume of concepts and supporting details which are often presented in a science textbook, this method is not designed to provide a quick way of assimilating the material, but rather to help the student develop an understanding of the scientific process. Using this system, which combines many features of study reading methods previously discussed, students will be able to locate central ideas and their associated supporting details while also developing a technique for learning new vocabulary. The strategy further requires students to study actively and become involved with the material. Concentration and retention are enhanced as well, and unlike the already existing methods, the approach is flexible enough to be used with a variety of organizational patterns used in science textbooks.

Strategy for study reading the sciences

Overview

Before reading the material, skim the chapter title, headings, problems and summaries. This step allows one to gauge the assignment and set goals for that study session. Based on this review, set goals for the amount of material which can adequately be studied in a 20 to 40 minute block. As Buzan (5) notes, this time period allows maximum understanding and recall of the material. Mark in the text the section which will be covered during the session, and write on the top of the paper the purpose and goal for that assignment.

Brainstorm

After overviewing the material, review what is already known about the topic. Bull (3) indicates that by asking curiosity-arousing questions, learning

is facilitated, and more effective retention results. Furthermore, this step can be used to help the student become emotionally involved with the material, which as Fea (7) suggests, can promote the active learning process.

Read

Read through the material for general understanding. At the same time, make short notes in the margin of the text, and underline any unfamiliar terms. During this process, Adler (2) recommends that one attempt to see the relationship among main ideas and facts, and analyze the general pattern of development of the material. Also, relate the information learned back to the ideas and questions posed during the brainstorming period.

Visualize

Using a map, graph, or flow chart, diagram the material so that a visual picture of the information is obtained. Buhan (5) points out that this allows the associations between concepts to be readily seen, increasing recall of the material. Using various colors or shapes to emphasize special topics or terms, comprehension is further strengthened by helping the reader to create a vivid mental picture. The use of visual imagery to organize material, as Levin (11) suggests, can be of value to readers with comprehension problems.

Elaborate

Use the recall column in class notes taken according to the Cornell system (13) to further embellish terms, concepts, experiments, or calculations. For example, the etymology of technical terms can be outlined in order to improve vocabulary or retention. Mnemonic systems can also be developed in the recall column. Since the associations between facts have already been mapped, memorization without understanding is avoided, and one can view how specific information fits within the larger topic. The recall column can also be used for recording review questions or additional ideas.

Review

Review central concepts, new vocabulary terms and experiments. Check to see that the goals for the session were accomplished.

Although this method may require extra time from the student, the result is a clearer understanding and integration of subject matter. Concentration improves as well, and the information is retained more effectively. Additionally, this strategy allows the student to develop the critical thinking skills necessary for success in science courses.

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HOW TO PLAN AND DRAFT FEDERAL AND PRIVATE FUNDING REQUESTS

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Many educational institutions are seeking to increase their participation in Federal and private foundation programs for program development, research and training. Because of frequent changes in agency administrative procedures and personnel, it is often difficult to obtain the information needed to compete effectively for the funds. The purpose of this article is to help identify possible funding sources and to enumerate the steps involved in drafting a proposal.

Funding sources

The first step in proposal writing is to match funding needs with appropriate granting agencies. There are usually a variety of sources on each campus for locating information about potential funding agencies. Many colleges and universities have an office of research and development which provides information on funding topics and agencies. If there is not a specific office of research and development, there may be a dean or other administrative officer charged with this responsibility. Generally, this office will have personnel to assist proposal writers with information about funding programs including the program emphasis, guidelines and deadlines. In addition, brochures with general information on proposal writing, sample proposals, lists of those who have received grants, grant application forms and other resources are usually available in this office.

If there is no designated office of research and development on campus, it may be helpful to seek the advice of colleagues who have received funding. These persons may be able to offer assistance by sharing successful proposals, by listing funding sources, by providing agency contacts and by reviewing the potential proposal.

Campus and public libraries have references which contain information of public and private grant programs and contract opportunities:

1. *Federal Register* is a government publication which describes regulations and legal notices issued by Federal agencies. It includes funding programs of government agencies including a summary of the program, the rules and regulations, the purpose, dates and persons to whom comments and questions may be addressed. It is published daily Monday through Friday except legal holidays.
2. *Hearings before a Subcommittee of the Committee on Appropriations House of Representatives* is a congressional record of the transcript of hearings regarding specific governmental departments. There is a separate publication for the hearings of each department. Each record is published once per year and is free upon request. The information includes past funded projects, percentages of funded projects, and projections for future funding.
3. *The Catalog of Federal Domestic Assistance* is a looseleaf reference containing the most current data available on the status of congressional action on program legislation. An update is published later in the year. Detailed program descriptions include information on eligibility, the application and award process, requirements, guidelines, dates, contacts and the range of financial assistance available.
4. *The Annual Register of Grant Support* lists more than 2,000 grant-supporting organizations with complete program descriptions detailing the type, purpose and duration of the grant, funding available, eligibility requirements, the organization's area of interest, and other pertinent information.
5. *Commerce Business Daily* is a daily newspaper with a section entitled "Requests for Proposals" where agencies solicit work in specific subject areas.
6. *The Foundation Directory* describes private funding sources for institutions and individuals. Information regarding over 5,000 foundations listed by state and city describes the interests of the foundation, eligibility, amount of awards, and contact persons.
7. *The Foundation Grants Index* which includes grants of \$10,000 or more is a cumulative index which guides readers to grants in their fields of interest as well as to the geographic region of each granting foundation.

There are a number of agencies particularly interested in funding projects related to teaching and learning in higher education and adult basic education. These offices prepare program guides which list all grant programs and contract opportunities for the forthcoming year. The Department of Health, Education and Welfare (HEW) has offices and divisions which sponsor grant competitions each year, among them is the Office of Education and the Education Division. The Office of Education focuses on a variety of activities including basic skills improvement. The Education Division administers the Fund for the Improvement of Postsecondary Education (FIPSE), which provides assistance through solicited grants or contracts to

educational institutions and agencies. The Office of Human Development Services awards grants to public or other nonprofit institutions of higher learning. The National Institute of Education (NIE) is mandated to support research which will improve the quality of education and will foster equality of educational opportunity.

Investigators may also wish to explore funding possibilities with other governmental offices which also support research and activities. The National Science Foundation (NSF) provides grant and contract support for research and education in the sciences. The National Endowment for the Humanities (NEH) has a Division of Education Programs whose objective is the improvement of instruction in the disciplines of the humanities including the improvement of student writing ability within the context of the humanities.

Although the primary funding emphasis is not educational research, the following agencies have specific programs involving educational emphases: the National Institute of Mental Health, the Department of Labor, the National Institute of Justice, the Department of Housing and Urban Development and the Department of Defense.

Many state colleges, land grant colleges and state universities are affiliated with the American Association of State Colleges and Universities which has an office of federal programs whose primary role is to serve as an information center linking campus representatives to Federal agency personnel. This office provides a source in Washington, D.C. from which participating institutions may obtain information and assistance concerning Federal and foundation programs.

Steps involved in drafting a proposal

After locating the appropriate funding source, the investigator should peruse the rules and regulations of the guidelines to determine the capabilities of the institution to accomplish the requirements of the project. Following this, a search of the literature should be conducted to determine the state of the art relative to the project goals. It is also important to determine how the proposed project will contribute to knowledge and research in the field.

Proposals must reflect a cooperative effort between the investigator and the administration of the institution; therefore, the investigator should apprise the appropriate administrators of program needs, funding opportunities and feasibility of institutional support. It is essential to receive administrative backing before proceeding. Furthermore, administrative personnel may have advice and information that may improve the proposal.

Projects which propose to involve community facilities and persons require the investigator to canvas community agencies and leaders to obtain commitments of support and cooperation with the project.

Investigators should consult with faculty from relevant disciplines for

projects with interdisciplinary aspects. In some instances, investigators may wish to utilize these colleagues as project consultants.

An important step not to be overlooked is the need to consult with staff members of the funding agency in order to describe the nature and scope of the proposal. Investigators can determine whether there is a need to redirect the focus of the project, can obtain the budgetary range which will be available, and can receive specific advice on the format and organization of the proposal draft. At this time, it is possible to determine definitely whether the proposal is within the priority interest of the agency. If the agency selected is not the appropriate funding source, it is helpful to make that determination before expending additional effort and time. However, other agencies should be contacted until an optional funding source is located. Recognizing that direct personal contact is the best way to obtain accurate and specific information about funding possibilities, some institutions have grants-in-aid available for this type of travel.

If it is not possible to visit potential funding offices, contact may be made by letter or telephone. The letter or phone contact should be used to briefly outline the proposed project and the need for the project, to state the objectives of the project and to set forth the means of achieving the objectives. If a letter is sent, it should be limited to two pages. A one-page vita highlighting the background of the investigator as it relates to the project should also be included. The letter or phone contact should request an indication of the degree of interest in the proposed project and how the project could be adjusted to meet the funding agency's priorities.

Upon completing agency contacts and selecting a potential funding source, the investigator should formulate an outline of the information to be contained in the various elements of the project. The outline should follow the organization required in the agency's guidelines, if they are available. Occasionally, an investigator needs to begin drafting a proposal before the guidelines are published. And, in some cases, no guidelines are available. The following information is usually required in most proposals:

1. *Project Title.* This should fully describe the proposed project but be limited to as few words as possible. The words "project" and "proposal" should not be included in the title.
2. *Abstract.* The abstract should be limited to 200 to 250 words. The significance of the project, what is to be accomplished, how it is to be done, and the time frame of the project should be stated concisely. The abstract helps to capture attention and creates the first impression of the proposal.
3. *Table of Contents.* All major sections and specific locations should be included in the table of contents. Where several sets of regulations must be followed, as in the case of the Education Division General Administrative Regulations (EDGAR) and the program regulations, it is helpful to list each regulation in the table of contents and to specify the page or pages where the regulation is addressed.

4. *Narrative or Description of the Proposed Project.* This part is frequently written as a statement of need emphasizing the importance of the project locally and nationally. The need or problem should be somewhat narrow in scope and have attainable goals. The research in the field should be summarized and should be used to support the need for the proposed project. The relationship of the project to the interests and goals of the potential funding agency should be emphasized. The introduction sets forth the major focus of the proposal.
5. *Goals.* The goals of the project should be generalized statement(s) about the anticipated accomplishments of the project.
6. *Objectives.* Statements concerning project objectives should be precise. The objectives should have measurable outcomes, should be clearly defined and should be realistic in terms of budget and time frame.
7. *Implications of the Project.* This part of the program description should highlight the reason why this project is being proposed and its value to the project population and the state of the art. The key words are *results* and *impact*: what is expected to be accomplished and what implications the results will have on the field.
8. *Procedures or Project Design.* This is the section of the proposal which describes how the objectives will be accomplished. It is important to be specific and to describe in detail what is to be done (program activity), by whom (personnel), to whom (target population), when (time frame) and for how long (time span). In some proposals it is useful to list specific activities and the equipment and materials needed for the activity with their relevant objectives.

If the procedures section is unduly lengthy or restricted by the agency, the use of appendices can help reduce this section.

The time frame for the project may be included in this section or in a separate section with its own heading. The investigator should set forth the sequence and timing for each part of the project including the evaluation, preparation of final report and dissemination of results.

9. *Evaluation.* A concise description of the evaluation design is important, particularly in educational proposals. The main goal of evaluation is to provide information as to whether the project accomplished its goals.
10. *Dissemination.* In projects where dissemination of project results is required, the investigator should take care to include a report to the agency among the list of means of dissemination. Published papers, workshops, a project newsletter, production of audiovisual materials and speeches are some of the ways project results can be shared.
11. *Literature Review.* Although the literature is summarized in the introduction, it should be more fully described in a separate section of the proposal. Projects and investigations which provide background for or support the proposed project should be briefly described. If the investigator has participated in similar prior investigations, these should be noted.

The list of references should be as current as possible, citing the most recent advances in the field.

12. *Equipment and Facilities.* Investigators should describe the equipment essential for the project: items which will be made available to the project by the institution and items which must be purchased for the project. Generally, proposals for educational activities should be designed to utilize existing facilities at the institution or in the community.
13. *Personnel.* It is important to carefully estimate personnel requirements. Vitae which highlight experience and publications relative to the focus of the proposal should be included.
14. *Budget.* The investigator must provide estimates of all direct costs including salaries, wages, fringe benefits, consultant fees, travel, supplies, equipment, services, and facilities. Many institutions have a fixed percentage to cover the indirect costs involved. However, in some cases, indirect costs may be negotiated between the institution and the sponsoring agency.

It is important to consult on budget matters with the campus office of research or the financial officer responsible for institutional proposals before figuring fringe benefits and indirect costs. It is also helpful to consult with colleagues who have been funded by the potential sponsoring agency to determine their budget experience with the agency.

It is not advisable to over or underinflation budget figures. Most agencies will accept proposed figures as accurate and necessary expenses for the project. Agencies have been known to call and negotiate on budget matters when they are interested in a project but cannot fund it at the proposed level of financing.

15. *Appendices.* When a sponsor limits the length of the proposal to a specified number of pages, the appendices can be useful for the inclusion of data of peripheral benefit to the proposal. Letters of support, article reprints, tables and graphs may be included.

Conclusion

When the proposal is complete and ready for mailing, the investigator should be certain required forms accompany the proposal draft. Forms required by the funding agency are usually included in the application package. There also may be special institutional forms which need to be signed and included. It would also be helpful to have personnel of the research office or a previously-funded colleague proof-read the proposal before mailing.

In case the proposal is not funded, the investigator should request reviewers' comments and information regarding resubmission.

By no means have we covered the breadth of the topic, but we hope you will find what you need in what we have covered or in the resources cited.

APPENDIX

Funding information sources

American Association of State Colleges and Universities
One Dupont Circle, N.W.
Suite 700
Washington, D.C. 20036

Annual Register of Grant Support
Published annually by Academic Media
Division of Computing and Software
32 Lincoln Avenue
Orange, New Jersey 07050

Catalog of Federal Domestic Assistance
Published by Office of Management and Budget
Available from: Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402, or your local Federal bookstore

Commerce Business Daily
The Commerce Department
United States Government
Washington, D.C. 20230

Federal Register
Published by the Office of the Federal Register
Available from: Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Federal Assistance for Postsecondary Education
Published by the Congressional Budget Office
Available from: Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

The Foundation Center
1001 Connecticut Avenue, N.W.
Washington, D.C. 20036

The Foundation Directory
Columbia University Press
136 S. Broadway
Irvington, New York 10533

Foundation Grants Index

Columbia University Press
136 South Broadway
Irvington, New York 10533

Foundation News

Published by Council of Foundation, Inc.
588 Seventh Avenue
New York, New York 10019

The Grantsmanship Center News

The Grantsmanship Center
7815 South Vermont Avenue
Los Angeles, California 90044

Hearings before a Subcommittee of the Committee on Appropriations
House of Representatives

Available from: Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Funding agencies

Department of Health, Education and Welfare
Office of Education
Washington, D.C. 20202

Department of Health, Education and Welfare
Fund For the Improvement of Postsecondary Education
400 Maryland Avenue S.W.
Room 3123
Washington, D.C. 20202

National Institute of Education
Department of Health, Education and Welfare
Washington, D.C. 20208

Department of Health, Education and Welfare
Office of Human Development Services
Grants Management Division/OAM
200 Independence Avenue, S.W.
Room 345 F4
Washington, D.C. 20201

National Science Foundation
Washington, D.C. 20250

National Endowment for the Humanities
Washington, D.C. 20256

Proposal assistance

The Bread Game: The Realities of Foundation Fund Raising

Glide Publications

330 Ellis Street

San Francisco, California 94102

A Comprehensive Guide to Successful Grantsmanship

The Grant Development Institute

2552 Ridge Road

Littleton, Colorado 80120

Developing Skills in Proposal Writing

by Mary Hall

Continuing Education Publications

Office of Federal Regulations

Extension Hall Annex

University Campus

Corvallis, Oregon 97331

Grantsmanship, Money and How to Get It

Academic Media

32 Lincoln Avenue

Orange, New Jersey 07050

How to Write Successful Foundation Presentations

by Joseph Dermer

Public Services Materials Center

104 East 40th Street

New York, New York 10016

How to Get Your Fair Share of Foundation Grants

by Joseph Dermer

New York Public Service Materials Center

104 East 40th Street

New York, New York 10016

Program Planning and Proposal Writing

Grantsmanship Center

1015 West Olympic Boulevard

Los Angeles, California 90015

Proposal Development Handbook

American Association of State Colleges and Universities

Suite 700

One Dupont Circle

Washington, D.C. 20036

Seeking Foundation Funds
by David M. Church
National Public Relations Council
815 Second Avenue
New York, New York 10017

TEXT STRUCTURE AND CRITICAL READING

Ann Coil and Thomas Bean
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A psycholinguistic view of the reading process postulates that reading is an interactive process of communication between the author and the reader. In this tacit communication contract, the reader must actively search for, and efficiently apply a variety of cueing systems to reconstruct meaning from the text. The author, in turn, must provide appropriate cues in the use of structure, diction, and syntax for this complex interchange of ideas to be successful.

Cueing systems can be characterized as those that are internal or external to the reader. The reader's prior knowledge, interest, attitude, and fluent reading skills comprise internal cues that influence textual communication. External cues include the organizational structure of the text, technical language, and the demands of a particular reading assignment. Both internal and external cueing systems have received a good deal of research attention in recent years. In particular, research exploring the influence of various text structures on students' comprehension offers a framework for rethinking our adjunct course content in the area of critical reading.

College students are confronted with texts of widely varying structure and technical language. Introductory general education courses typically contain new and unfamiliar subject matter presented in texts that surpass their high school counterparts in readability demands and comprehensiveness. Moreover, the college context places ever-increasing cognitive demands and expectations on students. Coil (2) cited a survey in which academic faculty felt that students should be able to engage in the synthesis and evaluation of ideas contained in texts. Certainly this is not an unreasonable expectation, provided adequate support systems exist to help beginning college students develop the ability to synthesize and evaluate diverse textual information.

Unfortunately, traditional approaches to the development of critical reading at the college level often involve a rehash of general high school reading improvement content. Practice in skills such as recognizing the

author's tone, intent, purpose, and use of propaganda techniques is the usual offering. The materials used to reinforce these skills may bear little relationship to the content or structure of academic texts. These materials often consist of passages displaying an attribute (i.e. listing) pattern of organization that lists detail upon detail followed by a series of disparate, factual questions. Basic research in psycholinguistics exploring the interactive relationship of text structure and memory for information suggests that our traditional approach and our instructional materials may be inappropriate for helping students cope with academic texts. (4,5) This lack of cognitive transfer from our adjunct reading classes to the demands of academic text reading is likely to persist unless we incorporate the findings of basic research into our course development. Some of the more salient findings from text structure research support the introduction of specific text processing strategies in our adjunct courses that will foster the synthesis and evaluation of text concepts.

Text structure

A text's dominant organizational pattern and related superordinate concepts (i.e. macrostructure) comprise important text structure variables that may inhibit or facilitate students' ability to synthesize and evaluate information. (5) Indeed, Ausubel (1) noted that some text authors make little effort to explicitly delineate relationships among ideas, to point out significant similarities, and to reconcile apparent inconsistencies. Such a breach of the communication contract may result in the following problems for the beginning college student:

1. Cognitive strain and confusion because multiple terms are used to present one concept.
2. Limitations in the acquisition of essential insights because artificial barriers are erected between related concepts.
3. Inadequate repetition of relevant and previously learned concepts.
4. The perception and retention of similar concepts as identical because subtle but significant differences are obscured.

Uninitiated readers are left to their own devices in the identification of key concepts, perception of significant similarities and differences, and connection of cross-referenced ideas. Without some specific guidance in identifying various text structures, beginning college students are not likely to be successful at this task.

Meyer (5) provided a useful description of four types of expository text macrostructures and a discussion of their varying comprehensibility. Her four macrostructures and a brief example of each from Readance, Bean, and Baldwin's *Content Area Reading: An Integrated Approach* are as follows: (6)

1. Adversative: Relating a favored view to an opposing view.

Example: Few would argue that large cities offer more job opportunities and cultural activities than rural areas. But cities are plagued by some very unattractive side effects of economic and cultural abundance. The two most noticeable side effects are overcrowding and pollution. Indeed, rural folks frequently argue that their uncrowded vistas and clean air far surpass any urban advantages. Yet rural areas have few jobs, making the city the most popular dwelling place, despite its discomforts.

2. Covariance: Relating an antecedent condition to its consequent.

Example: Many of the freeway off-ramp signs were blacked-out at night. This unfortunate event was not due to any concerted plan to save energy, rather, the original wiring job was simply not up to specifications.

3. Response: Relating a problem to a solution.

Example: Crime is increasing in the city. It is unsafe to be on the streets at night. The mayor and city council should pass the gun control law and hire more police.

4. Attribution: Relating a collection of attributes to an event or idea.

Example: Contemporary bicycles now come in a multitude of sizes and shapes. There are sleek 10 speed models, squat three wheel adult tricycles, and functional moto-x bikes built for rugged terrain. Operating a bicycle shop is no longer the simple task it was in the Wright Brothers' era.

Meyer (5) found that college students were better able to comprehend and retain adversative and covariance structures than attribution structures. Using the external cues of a text's macrostructure as a mental outline for retention and retrieval seems to work best when comparisons or causal links are portrayed explicitly in the text structure. In contrast, texts that simply list an array of details or attributes are difficult to organize in long-term memory.

Given these salient findings from basic research on the differential effects of various text structures, what implications can be derived for our adjunct course content in critical reading? Meyer (5) noted that many beginning college students approach text assignments with a restricted organizational schema. They may perceive all expository texts as simply a collection of details to be rehearsed and memorized rather than organized into a long-term schema that permits synthesis and evaluation.

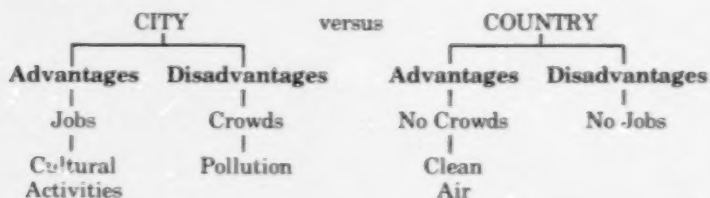
This finding suggests that we need to alert students to the differences in text structure and provide them with specific strategies for detecting these differences. In this way, students can begin using a text's macrostructure as an effective retrieval cue. Among the many approaches available, graphic

post-organizers (3) can be constructed and applied by college students in their diverse text reading assignments.

Graphic post-organizer

A graphic organizer or structured overview is a schematic outline of a text chapter's macrostructure. (3) Although it has been promoted and applied most often as a teacher-made, pre-reading guide, recent research (7) suggests that it is most effective as a post-reading framework for synthesizing and evaluating text concepts. Our experience indicates that the following steps are crucial to instructing beginning college students to discern text structure and to apply graphic post-organizers as an aid to critical comprehension.

1. Introduce students to the four text structures using simulated content material.
2. Have students identify dominant text structures in their academic texts.
3. Introduce students to graphic organizers depicting the four text structures in simulated content material. For example, a graphic post-organizer for the adversative city versus country example might look like the following:



4. Have students work in small groups to develop graphic post-organizers for their academic text reading assignments.

As beginning college students develop some facility with the process of identifying divergent text structures and constructing graphic post-organizers, they can better engage in the critical synthesis and evaluation of ideas. Most importantly, the use of text-based critical reading strategies gives our reading courses a more direct and productive application to the demands of academic learning.

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DIVERSIFIED MODES FOR PROFESSIONAL AND GRADUATE TEST PREPARATION PROGRAMS

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For the past seven years, the UCLA Learning Skills Center (LSC) has presented programs and workshops preparing students to take graduate and professional school exams. Students initially requested assistance because they found it difficult to obtain information about the examinations and they did not know how to develop the skills that were tested. Students knew that private test preparation courses existed, but many were unable to afford the fees charged and/or unable to attend the evening and weekend sessions scheduled. Consequently, the Learning Skills Center decided to offer counseling and preparation programs for graduate and professional school exams.

From these beginnings, and at the continued requests of UCLA students and university departments, the Center has presented five different programs and workshops. These are:

1. Ten hour workshop for the *Graduate Management Admission Test* (GMAT);
2. Six hour workshops for the *Graduate Record Exam* (GRE) and the *Law School Admission Test* (LSAT);
3. Three hour programs for the *National Teachers Exam* (NTE) and the *Foreign Service Officer's Exam* (FSOE);
4. One hour information programs relevant to all tests; and
5. Manuals to be used in the Lab.

A portion of time of two counselors, Idell Holburt and Margaret Wilson, is spent on developing, conducting and administering these programs. They are assisted by another counselor, Deborah Hogan, who presents the sessions devoted to the quantitative sections of these tests. The subject of this paper is the programs and workshops presented by these counselors.

Ten hour workshops

In this workshop offered for the *Graduate School of Management Test* (GMAT) four and one-half hours are scheduled for students to take the sample test published by Educational Testing Service (ETS) in the *Graduate Guide to Management Education*. The goals of the entire ten hours are:

1. to provide students with the opportunity to take the sample *GMAT*.
2. to familiarize students with the sections of the test.
3. to help alleviate the anxiety caused by the test taking situation.

The objectives of this workshop are:

1. to give each student the opportunity to evaluate test performance.
2. to analyze each section of the test.
3. to give each student the opportunity to receive suggestions for skill development based on the test performance evaluation.
4. to review test taking strategies.
5. to provide a forum in which students can ask questions and receive informed responses.
6. to provide students with a bibliography for the development of required skills.

Six hour workshop

These programs are offered for the *Law School Admission Test* (LSAT) and the *Graduate Record Examination* (GRE). For each of these exams there is a sample test published by ETS: the sample *LSAT* is in the *LSAT Admissions Bulletin*; and the sample *GRE* is in the *GRE Information Bulletin*. When students enroll in these workshops, the LSC gives each of them an information sheet about the sample test, an answer sheet and an evaluation form. The students are required to take the appropriate sample test and complete and bring the answer sheet and evaluation form to the first session. Thus each participant in these workshops has experienced and evaluated the test prior to the first meeting.

The goals of these workshops are:

1. to familiarize students with the sections of the test.
2. to help alleviate the anxiety caused by the test taking situation.

The objectives of these workshops are:

1. to give each student the opportunity to receive suggestions for skill development based on the test performance evaluation.
2. to analyze each section of the test.

3. to provide test taking strategies.
4. to provide a forum in which students can ask questions and receive informed responses.
5. to provide students with a bibliography for the development of required skills.

Three hour workshop

These workshops have been presented for the *National Teacher's Exam* (NTE) and the *Foreign Service Officer's Exam* (FSOE). They were developed and offered at the request of campus departments: the NTE by the Graduate School of Education, and the FSOE by the Placement and Career Planning Center (PCPC). Although they were coordinated by the LSC counselor, these programs were a team effort which utilized the resources and staff of the sponsoring departments and LSC; the professional with the most expertise in the particular area being reviewed presented that part of the program.

Because the NTE and FSOE emphasize content more than process, it was believed that a program reviewing the necessary content would require more time than the program planners could provide. Therefore, it was decided that the program would focus on the following goals which could be presented and would be of use to the students.

These goals are:

1. to acquaint students with information about the test.
2. to acquaint students with the format of the test.
3. to identify resources relevant to the test.
4. to alleviate anxiety pertaining to the testing situation.

The objectives of these programs are:

1. to review each section of the test.
2. to provide students with the opportunity to briefly experience each section of the test.
3. to review test taking strategies.
4. to provide a forum in which students can ask questions and receive informed responses.
5. to provide students with a bibliography for the development of required skills.

One hour information sessions

This program is open to all students preparing for any of the graduate and professional school exams. It provides a forum in which students can ask questions relevant to any step of the test-taking process, from general information about the availability and location of application booklets to specific questions about the sample test and sections of the test in which students are

weak. Students are also advised of the materials and resources they can use to develop the skills required by any of the tests.

The goals of this workshop are:

1. to provide a forum in which students can ask questions and receive informed responses.
2. to direct students to the appropriate resources.

The objectives are determined by the needs of the particular students attending each program.

Laboratory materials

The Center has developed two types of manuals relevant to the exams. One focuses on the specific test, *LSAT*, *GRE* and *GMAT* and contains a sample test and the analysis of answers in that test.

The other consists of manuals pertaining to specific skills and contains information and sample questions relevant to those skills. Several test sections appear on more than one test: Practical (business) judgment is part of the *LSAT* and *GMAT*; antonyms, sentence completion and analogies are part of the *GRE* and *GMAT*; reading comprehension is part of the *GMAT* and *GRE* and all exams contain quantitative sections. Although these test sections are the same, the information and questions provided by ETS in the respective sample tests are different for each test. By combining the descriptions, questions and answers pertaining to each section from the different sample tests manuals are created that provide students with more information and many exercises, all developed by ETS. Our assumption is that since ETS developed all the tests, the material they provide is the best indicator of the level of difficulty and type of questions for each of the sections.

The goals for these materials are:

1. to permit students to work at their own pace.
2. to permit students to work at times convenient for them.
3. to provide ETS material for practicing skills.

The objectives are:

1. to encourage students to understand each test section.
2. to encourage students to practice skills.

Conclusion

The UCLA community, students and departments, have endorsed and supported these programs. Advisors regularly address the groups; academic departments and student services have requested additional programs; and

student enrollment and attendance is high—158 attended workshops during Fall, 1979.

Evaluations, both objective and subjective, have validated the effectiveness of these programs. Although the LSC has no statistics to indicate how the students scored on their respective tests, Bob Ehrmann, the Associate Dean of Career Development, Placement and Career Planning Center (PCPC), who coordinated the *FSOE* for PCPC, has received some information. Several months after the program and the *FSOE* test that followed, he received a visit from a State Department official who reported that the number of UCLA students who passed the exam was greater than in any past year, and that UCLA students' scores were now comparable to those of students from the Ivy League colleges. Most successful applicants in the past were from these Eastern schools. The *FSOE* program was the only significant experience that, they believed, could account for the change.

This report tends to confirm our impressions which are based on students' written evaluations, comments, and most important of all, their enthusiasm and appreciation for our efforts.

THE SYNERGY OF VOCABULARY AND ANALYTICAL READING

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Very few, if any, reading educators will challenge the importance of vocabulary as a prime factor in reading success. This often leads to the temptation to teach vocabulary in isolation or in a artificial context. However, analysis of both skills shows that effective and efficient vocabulary development is dependent upon many of the factors psycholinguists have identified as crucial to effective and efficient reading. (2,3,5) For example, both processes are influenced by (1) knowledge of grapho-phonetic relationships, syntax and semantics; (2) attitude, interest and motivation; (3) physical, emotional, and environmental status; (4) previous knowledge and experience; (5) willingness and ability to think (beyond rote memorization to interpretation, extrapolation, analysis, synthesis and evaluation). Based on this observation it seems only logical to include a strong analytical reading component in a vocabulary class at the university level.

Class description

The vocabulary course offered by the Reading Department at California State University Fullerton may be taken for General Education credit in the area of Language Skills. It is an extremely popular course despite the level and amount of work required. The population is primarily that of students developing their skills for use in other academic areas although a noticeable segment is made up of students anticipating taking standardized entrance examinations such as the Graduate Record Examination and the law school entry examinations.

Since its purpose is that of a breadth requirement, we believe that the course should help to broaden the students' liberal arts education in as many ways as feasible. Accordingly, the course was designed to develop listening and speaking vocabularies along with reading and writing vocabularies. This paper focuses upon the enhancement of the reading vocabulary.

Philosophy

The philosophical basis of the class is psycholinguistic. (2) This theory states that the symbols on the printed page, the words and phrases used by the author, are meaningful only insofar as the reader brings meaning to them from his prior knowledge. The reader's success in predicting, testing and confirming depends upon his ability to interact with the author's thoughts as they are represented by the language which he, the author, uses. Because of this, the student who has limited prior knowledge must acquire it before he can expect to "read" the material offered.

This same philosophy is extended to the learning of new words. First, one must control those factors which would inhibit his interacting with the transmitter's thoughts and grasping the meaning of words, e.g. attitude; motivation; and physical, emotional and environmental status. Second, the understanding of a new word hinges on one's previous knowledge or experience related to the concept the word represents. Therefore, one must seek to expand his knowledge base. Third, a way of expanding the knowledge base and comprehending the function and nuances of words is by broadening one's exposure to language structure and style. Finally, since the results of rote memorization are limited at best, one must wrest (through interpretation, analysis, synthesis, evaluation, etc.) from the page and the mind those ideas necessary to understand and retain the meaning of a new word.

Materials

Commercial materials

There are many books on vocabulary development available commercially. A large number of them approach vocabulary growth through reading selections, looking up selected vocabulary words, and/or answering questions about the material. We reject these works not only because of the selections included, but also because of the level of thinking required to answer the questions posed. Often the student is called upon to deal with vocabulary words only. We believe that the author's meaning is much deeper than the words alone can reveal and conversely that often the words themselves cannot be defined without an understanding of the author's thesis or purpose. We also believe that the student becomes a better reader only if he moves beyond the factual, the translation and the interpretation levels of thinking. (1)

Instructor materials: the syllabus

To compensate for the void in appropriate materials, the syllabus utilized in this course was created with two purposes in mind. The first was to supply the student with material to be read and responded to analytically. The second was to provide a variety of quality readings in various areas which would enable the student to expand his intellectual base while developing his vocabulary.

Syllabus description

There are twelve reading exercises in the syllabus. The student selects any four. By means of class lectures and through completion of a sample exercise, he is made aware of the need to interact with the author's message and of the need to bring information to the page in order to extract meaning from it.

Activities

Activities which follow the reading exercises vary in difficulty and type from selection to selection, but the student might be called upon to do some of the following:

1. To investigate Latin and Greek sources of words.
2. To discern the author's meaning of vocabulary used in the selection. This requires checking definitions in the dictionary, comparing those definitions with the author's context clues and determining which given definition is nearest to the author's intent. Occasionally it will be apparent that an author is not using a term in a dictionary sense. The student must note this and comment upon it. The use of connotative meanings is not confined to the spoken word.
3. To consider the author's meaning in his use of selected phrases. The student would, for example, note and comment upon the way in which Poe's use of the phrase "crenelated abbeys" succinctly creates an impression. He would evaluate and interpret Madison's statement concerning "the genius of Republican government."
4. To interpret quotations used by the author and, in addition, to determine the author's purpose in including that specific quotation. Carneades' description of beauty as "a queen without soldiers" may be interpreted a number of ways. The student should note them as well as John Adams' purpose for including it in his missive.
5. To be aware of and to consider the effectiveness of the author's use of different figures of speech. Poe describes a clock as having "brazen lungs." The student should note the metaphor as well as the double entendre.
6. To synthesize the information in the reading, both explicit and implicit, in order to determine the author's fundamental statement. Benjamin Franklin writes amusingly to a lady friend of his observation of tiny insects in a garden. A closer investigation however, reveals a profound statement on the life of man.
7. To determine the importance of the chosen reading in the total body of knowledge possessed by the student and to evaluate its worth to the individual and to society. Sigmund Freud sets out his thoughts concerning human behavior in a communication to a colleague. The student must consider the information and respond to a question which asks what he sees as Freud's major contribution in the study of man.

Before responding to the readings, students are informed that there may be no single correct answer or solution. Their responsibility lies in the reading, the considering, the augmenting, the evaluating of the materials and the transmitting of their thoughts generated by these processes. The process is that of thinking carefully and informing the instructor of the extent of that thinking. (4) Any answer may be acceptable as long as it is adequately defended.

Selections in the syllabus

Limiting the syllabus exercises to twelve is difficult. Even if one considers only the "important" works in the Western world, the task is overwhelming. To narrow the field, the following guidelines were established:

1. Works should be chosen primarily from those in the public domain to avoid copyright complications.
2. Works should have literary and/or historical merit.
3. Works should be of sufficient difficulty to challenge the college level learner.
4. Works should contain vocabulary words which occur with low frequency in the written language.
5. Works should be of sufficient diversity to offer the students a choice from among them.
6. Works should relate whenever possible to the academic areas represented by the student population.
7. Works should be chosen to broaden and to reinforce a liberal arts education.
8. Works should be short enough, or set out in divisions, to be produced in their entirety.

Numerous works were considered. Among those investigated and rejected was Adam Smith's *Wealth of Nations*. While it fit most of the categories, it could not meet the requirement of number four. Adam Smith used common words! Jonathon Swift's priceless *A Modest Proposal* was rejected because of its length. Selections could have been included from each of the founding fathers, but that would not provide sufficient depth.

Conclusion

We are continuously evaluating selections for possible inclusion in the syllabus. Eventually we plan to have numerous selections which will alternate from one semester to another.

Student response is enthusiastic. Not only do they appreciate the opportunity to learn and perfect a vital reading technique as well as to increase their reading vocabularies, but generally they are pleased with the knowledge gained from the exercises which they select for study. As one student

said, "How satisfying it is to be able to read the author's words and know not what the *words* mean, but what the *author* means!"

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NEUROPSYCHOLOGICAL SCREENING AT THE COLLEGE LEVEL

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At the college level, many students with learning difficulties, including some with learning disabilities (LD) come to the attention of learning assistance services. For several reasons, data about LD students in colleges is sparse. One important reason for this is that many LD students have never been diagnosed and they are often unaware of the nature of their disability. Also, colleges and universities frequently discourage LD students from attending. Yet, LAC personnel are aware that such students do attend college and are often successful given high motivation, good coping skills and adequate support programs. In this paper, we will discuss a brief screening battery that may identify LD students as well as those with other learning difficulties.

When a student who seems to need diagnostic work comes to the learning assistance center, the traditional approach is usually to use psychological and educational tests to assess his ability level and functional academic skills. It is our contention that some common neuropsychological tests will add strength to the battery. Why does one need to know about brain-behavior functions? How does that knowledge strengthen what the learning specialist actually does with the client? We believe that this information is valuable and can help with a more exact diagnosis and with suggestions for remediation or referral. For example, it is important to be able to discriminate between students who may have slight brain damage and those who come from academically deprived backgrounds. Often they seem similar, but the academic expectations for those students should be quite different. Secondly, it may be possible to refer a student to another source, such as to vocational rehabilitation services, and to do this, a good diagnosis is necessary. If it appears that the student won't be able to complete his education at the university he attends, the diagnostic information can be helpful in counseling him vocationally. Of course, the most immediate use of the information is

for purposes of remediation and to help the student strengthen his academic coping skills.

There are other reasons why we believe it is important to include some neuropsychological screening measures in our testing. Reitan's (2) research with the *Halstead-Reitan Neuropsychological Test Battery* has shown that up to 80% of LD children can be correctly identified using these measures. Moreover, in testing supposedly normal college students for control group subjects, Pugh (1) has identified the presence of functional brain damage in approximately one third of her subjects. Frequently this damage is not apparent because of compensatory strategies, but it may affect academic functioning. Most importantly, students who come to us for help with their academic problems are concerned about themselves and their difficulties; they want to know what's wrong and what they can do to make their academic lives easier. We have an obligation to our clients to give them the best and most economical information within the realm of our expertise to help them chart future courses.

Development of the screening battery

In the past, it has always been apparent, in retrospect, which of the students in our credit course program had learning difficulties. By chance, we usually discovered some previously undiagnosed LD students, and we began to wonder how we might quickly and routinely screen in advance to help our students better. Ideally, the measures used should be brief; we had neither the time nor the resources to engage in hours of costly testing, and few of our busy students had the motivation. The approach that has evolved has worked quite well, although we do not consider it to be final. Like most batteries, the one we currently use is flexible and it can be changed to fit the needs of our students and our organization.

As they begin the credit course, students fill out a basic information form (BIF). Questions include their reasons for taking the course, what the last semester in school was like, and whether they have any special learning problems that make academics more difficult. The *McGraw-Hill Reading Test* (Parts One and Three) is given as a class pre-test. This testing takes less than one hour and can be accomplished in a single class period. Then, any student who has identified himself as having a special learning problem or who has scored lower than the thirtieth percentiles on the *McGraw-Hill* may be referred for further testing. For those students, the *ACT* or *SAT* scores are obtained. The *ACT*'s can be used as a rough measure of ability, so before a student has his first individual appointment, we already have some rough hypotheses about the student, his abilities and the possible nature of his difficulties from his BIF, reading test scores, and his *ACT* scores.

The third stage of our screening program is to set an hour appointment with the student. Here, we administer a variety of tests, making decisions as we go which additional tests to use or to eliminate. In order of administration, this battery can include:

1. *Wide Range Achievement Test, Level II*. The Reading and Spelling Tests can be used to ascertain reading level and decoding problems. From both, we can get important clues about phonics skills, dysgraphia and dyslexia. Math can be eliminated if necessary, but it can also supplement ACT information about basic computational skills and arithmetic reasoning levels.
2. The *Gray Oral Reading Test* is administered if the Reading Test on the WRAT suggests that the student's reading level is sixth grade or below. An *informal reading inventory (IRI)* is given if the reading level is above the sixth grade.
3. Based on the results of the reading test, the *Boyd Test of Phonetic Skills* may be administered. This yields specific information about decoding strengths and deficits in phonics.
4. The *Finger Oscillation Test* measures speed of finger tapping. Beginning with the preferred or dominant hand, the student taps five consecutive trials of ten seconds each with his index finger. Both hands are tested.
5. The *Trail Making Test* (Parts A and B) is administered. In Part A, the student must connect 25 numbered circles in sequence as quickly as possible. In Part B, he must connect 25 circles alternating with 25 letters (1-A, 2-B, etc.) as quickly as possible. Scores are the number of seconds needed to complete each part.
6. The *Aphasia Screening Test* is administered. In this measure, symptoms relating to aphasia are investigated. The student must name and spell common objects, tell the difference between right and left, read, write, draw, calculate, pronounce, and understand spoken language. The test is organized so that it is possible to judge whether any deficits are receptive or expressive in nature.

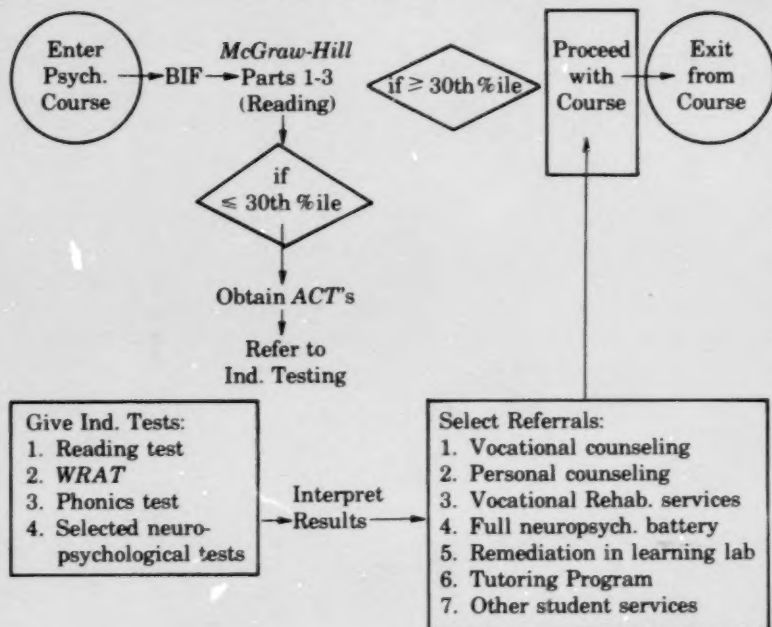
All of the last three tests are from the *Halstead-Reitan Neuropsychological Test Battery* and all three differentiate the presence or absence of brain damage and help to determine lateralization of any damage in the cerebral hemispheres.

When testing has been completed, we interpret the results to the student, make any appropriate referrals, and help him to integrate our remedial suggestions into a personal contract he designs for himself to earn his course grade. The accompanying flowchart illustrates how the sequence of testing works in the context of the credit course program.

Table 1 shows the general sequence of testing and gives a description of the measures used. It also shows some of the decision sequences in whether to include or exclude various tests. Remember that the first three tests in the table are administered before the student comes to college or as he enters the credit course; only the last six tests are individually administered in a session that lasts about one hour.

FIGURE 1

Sequence of testing in a credit course:
the psychology of effective learning



A case presentation

The case that follows is a specific example of how we have used this battery and some of the results. At first glance, J.L. appeared to his instructor to be a mannerly, well-motivated, but low average student whose disinclination to read may have explained his low reading rates and comprehension scores. However, about fifty minutes of testing and a brief clinical interview revealed quite a different picture.

J.L. was a 19 year old white male in his freshman year. He was referred for testing because of low *McGraw-Hill Reading Test* scores. His SAT scores were 360 Verbal, 220 Math, and 480 Total. J.L. said that he did little or no reading for recreation although he "used to read car magazines." In elementary school, he attended one semester of speech therapy. He had no discernable speech problems at the time of testing. He reported that he was an industrial arts major who hoped to become a general contractor with his brother and set up a business so that eventually, he wouldn't have to work.

TABLE 1

Table of Testing for Students with Learning Difficulties

Instrument	Administration Time	Purpose	Results
1. BIF	5-15 minutes	Self assessment of academic performance and motivation.	Student's knowledge of his own situation plus key indicators.
2. McGraw-Hill Reading Test: Pt. 1	16 minutes	Short term retention/reading speeds.	Comparison of student to national norms.
Pt. 2	40 minutes	Comprehension skills.	Same as above.
3. ACT or SAT	3 hours	Information about academic ability and achievement.	Same as above plus indicators of differences in verbal, math scores.
4. WRAT: Level II			National norm group information.
Reading Test	about 10 mins.	Word recognition, decoding, phonics.	Norms plus decision about what individual reading test to administer.
Spelling Test	about 10 mins.	Approaches to spelling, clues to dyslexia or dysgraphia.	Clues to auditory reception, possible disabilities, strengths.
Arithmetic Test	10 minutes	Basic arithmetic skills and computational abilities.	Math skills information. Norm groups information.
5. Individual Reading Test	about 10 mins.	Independent, instructional and frustration reading levels.	Comprehension and reading ability plus whether to administer phonics test.
6. Boyd Test of Phonetic Skills	5-15 mins.	Specific strengths and weaknesses in phonics.	Implications for remediation in phonics.
7. Finger Oscillation Test	about 5 mins.	Motor skills information.	Differentiates BD from non-BD subjects. Aids in lateralization.
8. Aphasia Screening Test	about 10 mins.	Assesses general integrity of brain.	Same as above.
9. Trail Making Test	about 5 mins.	Assesses general integrity of brain.	Same as above.

On the *WRAT*, his Reading Test score placed him at the eighth grade level and the examiner noted that he consistently put the accent on the wrong syllable of any word he did not know. In Spelling, he scored at the 27th percentile. An IRI showed that he could read independently at the 10th grade level. Some confusion of long and short vowel sounds was noted on the phonics test. On the three neuropsychological tests, he made several errors and performed above the critical cut off scores on the finger tapping test and on Part B of the *Trail Making Test*. An analysis of the nature of the errors was suggestive of signs of diffuse, stabilized brain damage involving both cerebral hemispheres.

J.S. did not appear to have a learning disability, although his scores were below average for his peers on the *SAT*, the *WRAT*, and in the IRI. The indicators on the neuropsychological tests, however, were enough for us to refer him for a full neuropsychological battery. In addition, we suggested vocational counseling since there were some unrealistic aspects in his reasoning about his career choice and because there were some questions about whether this would be an appropriate choice given the nature of his difficulties.

In summary, our experience with this battery is that it is quick and easy to administer. While there are certainly preferable ways and means to get diagnostic information, they are usually more lengthy. We chose to design a process that would conform to the limitations of our staff resources as well as our students' needs. We hope it will serve to stimulate other LAC's efforts also.

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HOW TO TEACH A READING AND STUDY SKILLS COURSE TO LAW STUDENTS

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The writer has reported elsewhere on the rationale of teaching reading and study skills to law students. (2,5) This article deals primarily with the teaching techniques and materials used in the teaching of reading and study skills to law students.

I have been teaching a reading and study skills course at the Law School at Brigham Young University for over five years and would like to point out that my background is not in the field of law but in the field of reading and study skills. I have written a reading textbook and a study skills textbook (4,1) and I am coordinator of the University Learning Center and tutoring program. I believe that any college reading teacher can teach reading in almost any content area with a minimum background in the content areas. When I teach law students, I make no attempt to hide the fact that I know very little about law. If a question comes up that I can't answer, I simply ask if there is anyone in the class that can answer the question. Every time, there are numerous students that are happy to answer the question. I do not believe this lowers me in the eyes of the students because I do not try to assume to be someone I am not.

I try to make the course as convenient for these busy law students as I can. The course is taught in a classroom in the law school, as many classrooms are available at the 4:00 p.m. hour. Enrollment takes place the first class period by having each student fill out a small "Add" card. All of the material used in the class is provided for them, such as folders, charts, and other handouts, with the exception of the textbook. (6) A locked cabinet is provided in the classroom to store textbooks and other materials when not being used.

After the "Add" cards are filled out, a discussion of various reading concepts such as subvocalization, reading flexibility, skimming and scanning is held. At that time, any questions are answered about the course. Usually questions come up about the difference in this course and commercial reading programs where they claim to read into the thousands of words per minute.

Law students have seen enough law textbooks and law cases to realize that this is impossible. A realistic goal for reading law texts and law cases is to double or triple the present reading speed with no loss in comprehension. Most law students read legal type material at around 200-250 words per minute. They feel to double or triple this in five weeks would be a great accomplishment. However, I explain that this cannot be done in just a few hours; it will take the full twenty hours of class time. Their slow reading habits are usually too deep seated to take anything less than twenty hours to change.

After most of the questions have been answered, we begin by reading the first reading selection in their text. These are articles that range from 1,000 words to 1,500 words. Their words per minute (wpm) are checked and each article is followed by ten questions to check their comprehension. These are then charted so their progress can be followed. The *EDL Controlled Reader* is used at least once and sometimes twice a session. I am amazed at how much they enjoy the *EDL Reader*; I have not found one group that hasn't liked it. I start the *EDL Reader* at 300 wpm and move up quite rapidly as the course continues to around 500 wpm. This is followed with the reading of a law case. Words per minute and comprehension are also charted for law cases.

A glossary of over a hundred law terms that are found in the law cases in the text is included in the Appendix.

After the first day, the class periods become rather routine beginning with a reading exercise from the *EDL*, followed by a reading article and then a law case.

Sometime during the second week of class, a new method of studying cases is introduced. (This is called the *FAIR method* for studying cases.) Following the reading of a case, the students are paired off and one student recites to the other what the *Facts, Action, Issue* and *Reasons* for the court's decision are in that particular case. Then when the next case is read the other student recites, using the *FAIR method*.

To add a little variety, I occasionally bring in *SRA Reading Drills*. These have not been too popular.

On the third to the last day of class, I explain that the next class period will be spent reading a novel. They have their choice of six novels. The novels range from 30,000 to 40,000 words in length. A brief report is required. They must keep track of their time in order to figure their words per minute and they must write two brief paragraphs explaining what they think the author's purpose is and what they got out of the novel. This is a new experience for them, as very few of them have ever read a complete novel in one sitting. They can hardly believe that they can read a novel that fast and still enjoy it.

Grades based solely on attendance removes the pressure of tests, reports and other grading procedures. Motivation is not a problem because these students are there to learn. However, they are very frank and open, and at times may be a little too frank for some teachers!

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WORKING TOGETHER: HOW TO MAKE, KEEP, AND USE FACULTY FRIENDS

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Developmental programs are frequently seen as stepchildren on campus. Faculty tend to view such programs as needed devices for retaining students, but bemoan the fact that students served in developmental programs possess mediocre abilities at best and would probably fail if challenged with college-level material. Others who support the concept of developmental education don't understand what developmental programs can and cannot do. Still others are willing to actively help in developmental functions if they are approached in the right way at the proper time.

What is needed by the developmental program are better ways of relating well to the faculty to convert potential program enemies, to inform friends about program capabilities, and to enlist the aid of those who can help the program function more effectively. I would like to suggest a series of activities to accomplish these goals. All have been tried and found effective in achieving and maintaining a high level of faculty support for developmental programs over a long period of time.

Making and maintaining friends

One quick and easy way to keep faculty informed about the developmental program is by a monthly report sent to key faculty and administrative people. This report should contain data relevant to the number of students needing basic skills help, the number of students served, new programs being started, progress of old programs, staff development activities, offers to perform services (readability surveys, etc.), possibly suggestions for improving teaching effectiveness, and a monthly commendation for a faculty/staff member who has aided the program in some manner. This commendation places the recipient's name before the administration and the department head in a favorable manner. Such unsolicited positive notice can help, albeit in a small way, in preparation of a tenure or promotion case.

Another channel for spreading favorable information is the department meeting. Speaking at a department meeting assures the developmental

program wide exposure. The larger the campus, the more certain it is that many faculty will not know the program exists. Appearing at the department meeting not only insures program exposure, provides information on program functions, and helps allay fears and negative feelings, but also associates a face with the program — which is a significant force in obtaining faculty referrals.

In making a departmental meeting presentation, brevity is essential because impatience and boredom can blunt people's desire to ask questions or to offer comments. Presentations frequently lead to a greater number of referrals and may lead to more willing and friendly voices when aid is requested at a later time.

Another way to gain support is to offer selected services to the faculty. At the beginning of each semester, a flyer might be distributed containing an offer to give study skills presentations for students in content classes, or to provide a readability survey for course textbooks currently in use or being considered for adoption. Though these services do cause a time drain, they benefit students at the same time as faculty members gain an opportunity to perceive developmental program staff as interested in their students. The word passes through the department about these services, and soon more instructors will ask for help. The effort is worth the relationships developed. The number of takers for the proffered services will probably remain small enough to handle, around fifteen requests for a typical fall semester.

Once faculty members know about available services and start sending students for help, the instructors should receive information on which of their students are coming to the developmental program and on the progress being made by these students. Frequently instructors complain that they have sent their students for developmental help, but that these students have not improved in their studies. Many of the recommended students don't come to the developmental program at all, especially if they think that their instructors won't ever find out whether they did. Providing formal feedback via referral slips means the students are aware that their instructors will know if they are coming for aid. Also, because the instructor writes down the areas on which help is needed, guesswork as to what the student needs to work on may be somewhat lessened. Feedback provided to instructors can help them feel that their referrals have not gone unnoticed, that their students have progressed, and that they as instructors have been partners in this progress.

Somewhat related to the problem of referrals is that of staff attitude toward the faculty. Nothing hurts faculty relationships more quickly than reports that the developmental staff has bad-mouthed faculty in front of students. If an English faculty member has redlined a student paper for questionable errors, the staff should focus on other grammar problems, try to explain what they think the instructor meant by the corrections, or tactfully suggest that the student get clarification from the instructor without implying that the instructor is wrong. Derogatory comments leave students discontented, but frustrated because they cannot change an instructor's grading patterns. Further, instructor bad feeling limits referrals, and thus oppor-

tunities to help students succeed. One unhappy instructor can create a pool of hostility toward the developmental program both within that particular department and in the faculty lounge.

Conversely, when a student compliments an instructor or when the developmental staff finds out something good about an instructor, this information should be passed on to the instructor at an appropriate time.

Gaining help

Approaching faculty members for help should generally be both positive and low key. Because we know that the developmental program helps students succeed, we should project this image of success to the faculty. We are important; we do aid students. In approaching faculty members for help, it is important to project the idea that we know that they are concerned with the success of their students and that we value their ideas on providing better student help. When faculty aid is requested, whether for a small task or a large one, the faculty members' suggestions, whether significant or somewhat off-base, need positive discussion. Change of attitude can generally be best accomplished by taking them at their starting place and slowly trying to move them to a new position. By discounting or ignoring views, we can lose a potential friend and ally. Frequently, compromises result in significant student gain.

When a faculty member indicates interest in aiding students, this interest should never be allowed to wane. In such situations, the director of the developmental program should be prepared with a suggestion that can be posed for action. Interest should be cultivated by inviting faculty to all program activities and by staying in touch with them. If contacts are not kept up, it may be hard later to convince faculty that we need them for future projects.

At the risk of some repetition, here is a partial list of possibilities for faculty participation in developmental activities:

1. publicizing in classes both general information on the developmental program and on specific developmental activities;
2. participating in programs to aid student academic adjustment (meeting with a returning adult group to discuss their courses);
3. making videotapes (including model notes and tests) for use in developmental work on note-taking;
4. taping descriptions of introductory classes for use during advertisement and registration;
5. providing copies of tests for use in teaching test-taking skills in the developmental program;
6. serving on a developmental studies committee;
7. supporting a budget request for developmental or related services;
8. taking time to talk about their courses with students who are interested in enrolling them;

9. providing the developmental program with syllabi for their introductory courses;
10. actively searching out likely candidates to become tutors;
11. aiding tutors by providing specific information and feedback on student problems;
12. backing within their departments proposals to give academic credit for tutoring;
13. backing within their departments and with appropriate faculty committees the giving of credit for developmental coursework;
14. attending developmental activities (learning center open houses, special interest group meetings) and encouraging others in their department to do so;
15. discussing student need for developmental services with their peers;
16. taking advantage of readability surveys and study skill presentations in their courses;
17. working with developmental staff to set up a referral system suited to their department's needs;
18. planning a work relationship between a study skills course and a section of their introductory course.

Getting one person in a department involved has great potential for a ripple effect. Word filters through other department members or through members of a coffee klatch or between lunch buddies about the helpfulness and concern evident in the developmental program.

If the help of a faculty member who has not directly expressed an interest in the developmental program is needed, a personal appeal, delivered during a slack season (not at the start or at the end of a semester, or during an advising period) is best. The approach should be for a specific need and should be made far enough in advance of the activity for which aid is being sought that there is ample time for the faculty member to prepare for participation.

A final consideration is the "thank you" for services rendered, which should be directed both to the faculty member and to the faculty member's superior. Such gestures make recipients feel appreciated, an uncommon event for many of them, and they can strengthen their willingness to do more things to aid the developmental program. The "thank you" is one of the best of public relations devices.

While no method of obtaining faculty support for a program is universally effective, those cited above have all been proven of value. From publicizing the developmental program to acquiring student and faculty respect for and participation in program activities, establishing close working relationships with the faculty is essential. Persistence is required, and emphasizing the need for aid from key departments will help in plotting the amount of time certain cooperative efforts should receive. Whatever time is spent will have a payoff in improved program effectiveness.

A CORE READING AND SPELLING VOCABULARY PROGRAM FOR THE SECONDARY AND COLLEGE LEVEL STUDENT: A DIAGNOSTIC-PRESCRIPTIVE APPROACH

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There is general agreement that basic or common vocabulary consists of words considered absolutely critical to the reading, writing or speaking process (6). To this date research indicates that the majority of common vocabulary lists are: (1) too short and restricted to primary level instruction; (2) too massive for effective use in an instructional setting; (3) usually based on frequency counts of words in print, children and adults' written or spoken vocabulary — rarely a combination of the three; (4) lacking in screening or placements tests which allow the teacher to determine mastery levels or to place the student appropriately in the program for instructional purposes; and (5) not available for the secondary and college-level teacher.

Research began in 1976 to develop a common core vocabulary list that would infuse the spoken, written and reading vocabularies (11). Four studies of words in print (3,14,5,9), two studies of written vocabulary (7,10) and three studies of children's and adults' speaking vocabulary (15,8,2) were compiled — resulting in the identification of 900 words common to the majority of the word lists. This word list is known as the *Reading-Spelling Vocabulary Program* (11) and is divided into four levels, each with 225 words appropriate for reading levels 1-2, 2-4, 4-6, and 6-9 respectively. A study involving 270 students in grades one through nine validated the reading levels for each section of the *RSVP* (16), and further research with community college and senior college freshmen indicates that as many as 50 percent of the students at this level could not show mastery of the words when reading. Eighty percent failed to show mastery with written spelling.

Common core vocabulary

The *Reading-Spelling Vocabulary Program* (RSVP) was divided into four parts. The first three contain 675 words appropriate for students reading

at grade levels one through six. Level IV contains 225 words for students reading at grade level six through nine. While the majority of words on the first three levels are nouns and verbs, the words on Level IV are primarily adjectives and adverbs. There is little question that a large number of our secondary and post-secondary students are not proficient with basic vocabulary, even though such vocabulary is considered to be junior high level. Many students cannot write this vocabulary even though they use it proficiently in verbal communication. While teachers of freshman English courses express their displeasure at the quality of written work, an important view often overlooked is that students will not write what they cannot spell correctly. Therefore, we recommend that, along with the concern for syntax, semantics and punctuation problems, techniques be developed not only to diagnose written spelling ability but also to make sure that students have mastered the use of a core of critically important vocabulary words that have universal use regardless of the content to be written. The writers believe that, until students become competent in the use of a basic core such as RSVP, progress will be severely limited throughout any field of study. On the other hand, once a core has been mastered, emphasis in vocabulary should be with the content areas. (See appendix)

RSVP placement tests

The RSVP Placement Test (12) is a simple criterion procedure to determine proficiency in reading and spelling. Form A and B are equivalent and correlate highly, with $r = .995$, and both forms correlate well with the reading subtest of the *Wide Range Achievement Test* (18) with correlations of .86 for Form A and .85 for Form B (16). The test contains 30 words each, randomly selected from the four levels of the RSVP. The words are read orally in the same manner that most word-calling tests are administered — a spelling dictation using the same words identifies spelling proficiency. The manual of instructions (12) provides details on the administration, scoring, interpretation and placement of the student into the RSVP at the appropriate level and lesson. While grade norms are currently being developed for spelling, reading norms are already available — as a criterion test, however, equivalent forms allow excellent pre- and post-test comparisons. All evidence does indicate that a vast majority of developmental and remedial students will not demonstrate mastery of Level IV and will need specific instruction in the use of such vocabulary.

A teaching strategy

Methods for teaching the recognition and spelling of vocabulary have long been a controversial area. Fitzsimmons and Loomer (4) have provided one of the best recent reviews of the literature and conclude that current practices in teaching written spelling have little basis in research. According to their review, good instructional strategies should include: (1) a heavy

emphasis on visual imagery; (2) analysis of words by structure, phonograms, syllable configuration or "clustering"; (3) immediate feedback and self-correction; and (4) combining reading and writing practice. The majority of spelling approaches today spend an inordinate amount of time learning rules, grouping words by phonetic or linguistic patterns, looking up words in the dictionary, working with words in context, dealing with meaning and other activities, many of which do not affect spelling itself. The Stetson Reading-Spelling Approach (13) was designed to teach reading and writing simultaneously and contains five simple steps, each heavily supported in the literature as a sound instructional strategy. Listed below are the five steps which teachers can use with individuals or groups of students.

Step one — visual/auditory decoding of whole word

Teacher pronounces word to the class while students look at the word. Students pronounce word in the same manner as the teacher.

Teacher exposes the word pattern on the screen and says: "Listen to the word — pattern — say it."

Students: "pattern"

Step two — visual/auditory decoding of word parts

While viewing the word the teacher pronounces the word parts or syllables and asks the class to repeat the word in the same manner.

Teacher: "Listen to the word parts — pat-tern. Say the parts."

Students: "pat-tern"

Step three — visual/auditory encoding by syllables

While looking at the word the teacher spells the word using a rhythmic pattern and making clear stops between the syllables — then asks the class to repeat in the same manner.

Teacher: "Listen to the spelling — p-a-t - t-e-r-n. Spell pattern."

Students: "p-a-t - t-e-r-n"

To further emphasize step three, the teacher might expand on the spelling and provide additional practice such as:

Teacher: "Spell pat."

Student: "p-a-t"

Teacher: "Spell tern."

Student: "t-e-r-n"

Teacher: "Spell pattern."

Student: "p-a-t - t-e-r-n"

Step four — auditory/motor encoding or spelling

For the first time, the teacher removes the card or covers the overhead projector and instructs the student to write the word on paper or on the chalkboard.

Teacher: "Now, write the word *pattern* on your paper."

Student writes the word.

Step five — immediate feedback and self correction

After everyone has written the word the teacher displays the word again and asks the students to compare their word with the model. If the word is written correctly, it is circled. If incorrect, a line is drawn through the word. Then it is written correctly and the corrected version of the word is then circled.

Teacher: "Now look at the word *pattern*. If you have spelled the word correctly, please draw a circle around your word. If you made a mistake, please draw a line through your word, write it correctly, and then draw a circle around the corrected word."

Keep in mind that only one word is shown at a time on the card or overhead, and the word is held in full view until Step Four, when the word is hidden while the student writes.

To this date, two major studies have been conducted comparing SRSA to traditional methods of spelling. In both studies those students taught with the simple SRSA scored significantly better on written spelling tests than those receiving a traditional basal spelling program (17,1). Research with elementary, secondary and post-secondary students in public school systems in Las Vegas and in Houston, as well as at the University of Houston, suggests that SRSA is a usable strategy at all levels and is most effective with the most severely deficient students.

Summary

The intent of this paper was to explore the notion that a large number of post-secondary students are deficient in the use of basic core vocabulary, not only related to reading but writing as well. The RSVP, Level IV, represents a list of common core vocabulary at the sixth through ninth grade levels that many college students cannot read proficiently, and many more cannot write. For those students, it makes sense to identify their performance levels and to teach the needed minimum vocabulary skills before success can be expected in the basic curriculum studies. The RSVP Placement Test and the Stetson Reading-Spelling Approach (SRSA) present the secondary and college instructor with a diagnostic-prescriptive strategy that is usable and supported by the research.

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APPENDIX

Level IV of RSVP for reading level 6-9

Lesson 1

serious
coma
artistic
courage
educate
healthy
library
region
rural
studious
vague
bored
canyon
grief
height

Lesson 2

actually
blurred
capture
earnest
scheme
monument
impossible
college
burial
similar
ascend
direction
condition
possibility
familiar

Lesson 3

emotion
medical
represent
separate
society
confidence
climate
activity
argument
damage
pleasant
realistic
opinion
morality
hesitate

Lesson 4

security
accident
beyond
collar
disgusted
satisfied
profession
magazine
occasion
dramatic
formation
hospital
incident
successfully
shoulder

Lesson 5

cultivate
completely
blossom
athlete
responsible
jealous
immediate
individual
domestic
especially
muscular
tremendous
unfortunate
accomplish
automobile

Lesson 6

develop
critical
business
attractive
apparent
reluctant
perplexed
interpret
hunched
facility
disturbed
situation
struggle
affection
beneath

Lesson 7

protection
obviously
institution
emergency
expression
favorable
straightened
solution
chasm
barbed
breath
ambition
continue
carefully
blizzard

Lesson 8

reflection
meditate
knowledge
equipment
experience
government
impression
technique
undoubtedly
decision
burglar
arrangement
advantage
dependent
connection

Lesson 9

eclipse
foreign
intellectual
orchestra
sensitivity
visualize
absolutely
caress
cemetery
discussion
fatigue
influence
miserable
quarrel
ultimately

Lesson 10

accustom
ceremony
career
desolate
ordinarily
intentionally
frustration
encourage
sufficient
assignment
considerably
disagreement
community
ancient
indication

Lesson 11

enthused
horrified
intrigue
language
particular
suspicious
valiently
definitely
conclusion
artificial
counsel
evidently
military
optimistic
fantastic

Lesson 12

symbolism
decoration
character
astounding
pathetic
modernistic
illustration
eventually
temporarily
associate
determination
crevice
atmosphere
ambulance
necessarily

Lesson 13

peculiar
exceedingly
persistent
discouraged
circumstance
explanation
agriculture
proposition
comfortable
destruction
complicated
depression
companion
appearance
appropriate

Lesson 14

persuade
existence
previously
distinguish
admiration
prominent
anticipate
despondent
anxious
collection
dejection
contemplate
admonish
apprehension
composition

Lesson 15

opportunity
exhausted
imagination
luxury
silhouette
sympathetic
bouquet
conscience
desperate
discernible
fashioned
hilarious
mischievous
hypnosis
disheveled

HELPING STUDENTS COPE WITH CONFIGURATIONAL TEACHING STRATEGIES

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Whatever a teacher aims to do in a course—whether it is to impart a body of information, develop skills, produce insight or discovery, or develop greater capacity for appreciation of creative works such as novels or films—the aims must be accomplished through strategies for communicating course content to students. Students inherently have a variety of cognitive styles which might enable them to adapt to a variety of teaching strategies, according to Maxwell. (2:209-222) However, in their efforts to learn as securely and painlessly as possible, many students tend to develop and rely on only a narrow range of cognitive styles. Typically, they anticipate a linear structure in which material is presented in distinctly separate blocks, with important concepts neatly and clearly defined, all arranged in a logical sequence. For a variety of reasons—some good and some bad—teachers and materials in a course often do not follow this tidy linear strategy. This incongruity between teacher's strategy and student's anticipations, or mental set, raises significant obstacles to communication, with resulting frustration for both teachers and students.

There are a number of reasons for failures in communication between teachers and students, but this paper will focus on only one major area: incongruity between teacher's strategy and student's mental set. Normally, learning assistance personnel cannot do much to change the teachers' approaches, so they must alleviate the problem by helping students adapt to the teachers. To help students adapt, learning assistance personnel need insight into the ways that configurational strategies operate. This paper will begin by describing various non-linear approaches under the general heading of configurational teaching strategies, and will then suggest specific attitudes and techniques students can use in coping with these strategies.

Description of configurational strategies

The essence of configurational strategies is that they require students to absorb and to integrate material presented in non-linear ways. One familiar

and relatively manageable configurational approach is induction, in which examples or other detailed material is presented, from which the student, more or less guided by the teacher, obtains the generalized insights or concepts. Another configurational approach relies on expanding awareness: the central body of theory, as in a basic public speaking class or a class on film appreciation, is presented early, and later material amplifies and enriches that central theory by providing examples, exercises, additional readings, and other material. A third configurational approach occurs when some central topic is approached first from one point of view focusing on one facet, then from another point of view, then from another, and so forth. A history course, for example, might approach a particular period first from the political viewpoint, then from the cultural, then from the economic, then from the sociological. In a fourth configurational approach, bits and pieces of material are thrown out in apparently random fashion, and the student is expected to organize the material into some overall framework.

Configurational approaches may occur on different levels in a course. An overall course design may, for example, be highly linear, but individual class sessions may be inductive or may appear rambling and random. On an even more general level than course design, skills in coping with configurational relationships may be required if the student is to relate the course to other courses and to vocational or personal aims. Lectures, class discussions, reading assignments, and exercises may use various configurational strategies, both internally and as they relate to other aspects of the course. Even the student's comprehension of key terms and concepts in a course may be developed through expanding awareness or through absorbing bits and pieces of relevant material from different aspects of the course.

It is a mistake to assume that configurational strategies always represent careless, disorganized instruction. Configurational approaches may provide means for increasing the affective dimension of learning, both as one final goal of the course and as increasing student motivation within the course. Such approaches may also encourage greater student discovery and more active involvement in the learning process, and they may produce more complex understanding of key concepts. These theoretical positive values of configurational instruction, however, produce genuine learning only if the student can respond to them competently and appropriately.

How do students actually respond to configurational strategies? Students who anticipate and are skilled with linear strategies, when faced with a configurational approach, can become confused and frustrated. As with a case cited by Maxwell (2:57), these students may become extremely anxious. Ultimately, unless they develop some insight and coping skills for the new strategies, they are likely either to give up in disgust or to lacerate themselves with guilt and more intense, but futile efforts to employ their familiar skills for linear material. Other, less obvious responses occur when students fail to take the necessary initiative in integrating different sources and blocks of material in the course, or when, in a course relying on an "expand-

ing awareness" strategy, they decide that since they have the outline of basic theory down there is nothing more to be learned as the course unfolds.

The basic problem is that students often cannot respond appropriately to the teacher's strategy. What is the solution? Two communication specialists working primarily in persuasion training provide the key, as reported by Goleman (1:69): "Typically, the most successful person in any field is flexible enough to shift to various strategies as the demands change." This assumption which the communication specialists explore for persuasive communication is just as valid for the student as receiver of instructional communication. The learning counselor can increase the learner's flexibility by encouraging appropriate attitudes and by providing specific techniques.

Attitudes toward configurational strategies

The first of these attitudes is the student's willingness to perceive the course, or learning situation, as the instructor has designed it and perceives it, rather than as the student would have it be. Such adaptive perception applies to the purposes of the course— affective and cognitive, insights and information— as well as to the strategies being used to achieve those purposes. The counselor with some awareness of various configurational strategies is more adept in helping the student to understand configurational aspects of any particular course and to see that accepting the course on its own terms is more productive than simply dismissing it as disorganized, inefficient, or irrelevant.

The second attitude is the student's willingness to make the requisite effort to become actively involved in the course. The student may, for example, have to take some initiative in fitting together parts of the course or in drawing generalizations or making personal applications from detailed material in the course.

A third attitude—or, perhaps more accurately, "habit of mind"— is the tendency to think of a course as a total unit with certain overall goals. The opposite of this attitude is reflected when a student asks, often to the annoyance of the teacher, "Will this exam cover only the last unit of material?" The student with a more comprehensive and insightful view of the course is more likely to see the relevance of apparent digressions in lectures, anecdotal material in textbooks such as those in James V. McConnell's popular textbook (3), films and guest lecturers in class, and loosely structured class discussions.

Finally, students must learn to be comfortable with delayed cognition. Almost by definition, configurational strategies tend to immerse students in a mass of material from which complete understanding of central insights and concepts emerges only over a period of time. Many students, often very conscientious ones, are comfortable only if they can comprehend the full relevant significance of every item in a course, bit by bit, as it first occurs. They distrust, for example, the powers of unconscious cerebration in which

the novelist Henry James put so much faith as producing truly creative insights.

These attitudes—willingness to adapt to the instructor's view of course strategy, active involvement rather than passive receptivity, awareness of overall goals in a course, and partial reliance on delayed cognition—can all help replace confusion, frustration, and anxiety with more positive and functional responses to college courses. However, attitudes, even under the guidance of skilled learning counselors, are often plants of slow growth. More specific techniques can provide immediate assistance for the student and can nourish the growth of these broader attitudes.

Techniques for configurational strategies

Perhaps the most important techniques are those the student uses to establish an overall framework for material in the course. These enable the student to separate the most important from the less important items of the course, to group material under general topics for better comprehension and remembering, and to understand the point of various materials and exercises in the course. Frequently, the student can discover these frameworks simply by knowing where to look and taking some initiative, for example, by understanding the rationale for the syllabus if one is provided, or by paying close attention to key orienting lectures at the beginning of the course or a major unit. Also, assignments and grading policy may bring the goals of the course into focus. If none of these clues is sufficient to reveal the instructor's focus, the student may have to impose his own structure on the course by, for example, keeping a separate section of his notes in which he lists what appear to be the main topics of the course, with cross-indexing to textbook material, lecture notes, and other materials which develop each topic.

In order to cope with a configurational strategy, the student must overcome the tendency to see each small block of material as a separate isolated unit. Among the techniques which will help here are periodic review and reflection which go beyond merely checking memorization. The student should actively try to relate earlier lectures and class discussions to later materials and to relate these to reading and other activities in the course and even to other courses and to personal and professional aims and experiences outside the course.

One obvious technique, but one which students often avoid with difficult material, is reading textbook assignments before corresponding lectures or discussions in class. Such reading, even when not immediately comprehended fully, can intermesh with class sessions to provide fuller insights and comprehension than would either reading or class sessions alone. The student should consciously relate each reading assignment to larger goals and framework of the course. Students will profit more from class discussion if in advance reading they note questions and comments to raise in class and if they resolve to take at least some sort of notes in class discussion.

Conclusion

We can look at the material to be communicated in some courses as a conglomerate intended to produce insights, relationships, and affective dimensions, as well as distinct items of information. Learning counselors can broaden students' range of attitudes and skills as receivers of communication, so that these students can better comprehend and absorb material in ways other than by tidy linear structures. The benefits of such training may go beyond helping students succeed in specific courses. If we are to believe Marshall McLuhan's (4) assertions, we all will face increasing demands to cope with configurational masses of material and experience in our lives. Perhaps learning counselors can do just a bit to help prepare students to cope with these larger demands as well as to succeed in college courses.

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TEACHING WRITING AS PROCESS IN THE WRITING LAB

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The peer tutors who work in the Writing Lab at the University of Texas at El Paso are trained to use a questioning procedure that teaches students to regard paper writing as a process that is done in stages in order to achieve a successful final written product. This questioning procedure may be used to help a student who is having trouble starting a paper, or it may be used to discover the weaknesses in a completed paper. In the training sessions, tutors are given a list of questions to ask students that will determine whether or not the student understands the details of the assignment, has selected a subject, has narrowed the subject by brainstorming, has thought about and discovered sufficient information about the subject before beginning to write, has made a working outline, has written a draft, has done enough rewriting, and has completed the final proofreading.

During tutor training sessions, new tutors practice asking experienced tutors these questions until they learn both the questions themselves and how to respond to the answers students are likely to give them. After tutors have practiced this scenario, they are told to keep the list of questions to use during actual tutoring sessions. (See Appendix for the complete list of questions for teaching a composing process.)

When tutors are familiar with these questions, and, in mock tutoring sessions, have practiced asking them and responding to the answers they are likely to receive, we then add the following five observations to help tutors teach the composing process effectively.

First, we explain that we begin with questions about the assignment because misunderstanding or misinterpreting the assignment is one of the biggest problems students face. "At Berkeley," Martha Maxwell (2:236) writes, "we have found in our learning center that the most frequent problem students express is inability to understand assignments." At the University of Texas at El Paso we find that our students are like Berkeley students and other students around the country who struggle to understand the details of assignments. A tutor needs to address the assignment problem first to assure that the rest of the student's work will be successful.

Second, we tell our tutors that most students, when asked whether or not they used a process, will answer that they did not. Furthermore, most students will not be familiar with the concept of a composing process and they not only will have to be taught how to use one, they will also have to be persuaded that it will help them. They need to learn, in Mina Shaughnessy's (3:81) words, to regard composition as a "deliberate process whereby meaning is crafted, stage by stage" rather than as "a single act, a gamble with words." When students follow a writing process, they learn to think before they write and to continue to think as they write and rewrite. The quality of each final product becomes more predictable.

Third, we remind tutors that the writing process describes a creative act that is, by its nature, often spontaneous, inspired, and difficult to manage in clearly defined "steps." Even though the process, as described on the tutor question sheet, is linear, and laid out in steps, in actual practice, these steps will overlap, back-track, repeat themselves. We suggest to tutors that understanding the process helps students get started, and it also prods them to continue until a written work is finished. Students should be warned, however, against mechanically following steps in a process without thinking. Creative powers interacting with the discipline and motivation provided by a writing process will help students achieve a final product that will satisfy both them and their instructors.

Fourth, we discuss the role of the subconscious mind in the writing process so that tutors can alert students to the value of working intensively on ideas for a time and then setting them aside to let them "incubate." Maxine Hairston (4:16), in her description of preparing to write in *A Contemporary Rhetoric*, lists "incubating ideas" as a key part of the preliminaries in the writing process. In his Preface to *The American*, Henry James describes the "deep well of unconscious cerebration" where an idea that needs much working out drops for a time to reappear later notably "increased," as he puts it, "in weight." We suggest to students that they work on the ideas that flood into their minds. All writers, including student writers, need to learn to take advantage of the work done by their subconscious as well as their conscious minds.

Finally, we warn tutors that they may at times have to ask students to begin a completed paper all over again. Tutors will need to take this approach when a paper has no clear focus, no organization, and insufficient depth of detail. In such a paper, it seems that the student is making the same generalization over and over again. When confronted with such a paper, the tutor is asked to use the question format presented in the Appendix to guide the student through the writing process again so that a better final product will emerge. Student and tutor may work quite closely together on process until it is time to compose a draft. Then the student should be left alone to write. When a draft is completed, the tutor may ask the student to read the draft aloud. Ideas for revision and rewriting may be discussed. Proofreading errors, at this point, should be ignored. Again, the student should be left alone

to rewrite. When the rewriting is completed, the student should, once again, read the paper aloud to the tutor. Many of the proofreading errors that were present in the first draft will have dropped out during the rewriting. Those that remain should be corrected and accompanied with explanations so that the student will not continue to make the same errors next time.

We use two additional aids to further help both student and tutor learn to use this process. We put signs on the wall of the Writing Lab that spell out the steps in the writing process in brief form under the general title, *How to Write a Paper*. Such signs can be referred to by both student and tutor as they work through the writing process together. We also have available as hand-outs examples of completed steps of the writing process. Students need to see another writer's brainstorming, outlining, and rewritten drafts. Many students never understand the basic ideas of process until they are provided with such examples.

At the beginning of this semester I asked the students in my own freshman English class what they regarded as their most severe writing problems. The two most frequent responses were the inability to concentrate while writing and a lack of confidence. The persistent tutor who helps a fellow student get started on a writing project, gives praise and encouragement as the work progresses, and asks questions when the student's attention wanders, can help solve these problems. Both tutor and student need to be cautioned, however, that not only persistence is necessary to make the paper writing process work; patience is also important. Few students are able to put the idea of process into practice with the first try. Three tries yield better results.

Tutors will learn rather easily to recognize those students who have finally mastered the idea of writing as process and who are beginning to use it successfully. Those students become more independent of their tutors than they were when they first sought tutorial help. They are also distinguished by their willingness to take responsibility not only to create their own work but also to judge the quality of the final product themselves. When we have taught students both to create and to judge their own work, we have prepared them for the writing they will do in other University classes and later as employees on the job.

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APPENDIX

Questions for teaching a composing process in the writing lab

The tutor begins:

1. Can you explain the assignment?
2. Are there length requirements?
3. Are there other special directions and requirements?
4. Do you have free topic choice or is the topic assigned?
5. Are you required to do library research? How much?
6. Is a bibliography page required?
7. What type of paper is it? (persuasive? expository? descriptive? narrative?)
8. Is there any terminology in the assignment that is not clear?
9. When is the paper due?
10. Can you break the assignment into parts?
11. Have you planned when you will do each part?

Then the tutor asks:

Do you know a process for writing a paper? Or, did you use one? Describe what you did. (Tutor checks to see where the process failed.)

If student answers above questions "no," or "sort of," tutor says: *Here is a process. Which of these did you do or not do?*

1. *How did you choose your topic?* If the topic is free choice, the sources for a topic might be: the course, discussions, recent reading, experiences, educational or professional plans. Can you get information on your topic? Do you have sufficient background? Do you know how to narrow your topic by brainstorming? (Tutor demonstrates how.) Can you now choose the best item on your list? Can you write in one sentence or one short paragraph what you now think your paper will be about?
2. *Did you do an initial investigation of your topic?* Let me show you how. Write out the answers to the following questions:

What ideas do you already have?

What sources can you consult for information?

Do you need general background information? How will you get it? encyclopedia? textbook?

Who is your audience? Can you analyze your audience's interests, background, experiences, expectations?

What examples and other supporting material might you use?

Let me show you how to brainstorm for examples and other supporting details.

What possible main heads might you use? Let's brainstorm and organize some together.

What might be the best organization pattern for this paper?

At this point, the tutor asks the student: Have you noticed that we have used several processes to help you invent ideas for your paper? We have, for example, talked about evaluating and drawing on your past knowledge and experience. We have used brainstorming and listing and we have asked questions to help you generate subject matter. There are other techniques you might use to develop ideas for papers. They include keeping an idea journal, jotting down ideas that surface while you listen to lectures or do reading assignments, meditating or thinking in private, discussing your ideas with others, doing directed reading on your topic, doing some purposeful listening to a speaker on your topic, observing, or interviewing.

3. If the student is writing a research paper, the tutor now asks, *Did you make a tentative outline to guide your research?* Did you write main heads only to keep you on the subject while you do your research? Or, if no research is required, the tutor asks, *did you outline your paper?* Tutor and student need to evaluate the logic of the outline at this point.
4. The tutor then asks, *Did you do library research?*
 - a. Did you make bibliography cards?
 - b. Did you find a variety of materials on your subject? Did you find books, articles, and microfilm material?
 - c. Did you take notes on cards? Did you list one idea per card?
 - d. Did you take three types of notes—direct quotes, paraphrases, your own ideas?
5. *How did you outline all your ideas and research materials?* Let's look at your outline.
6. *How did you compose your paper?* Did you write it fast? Do you think you captured the logic and flow of the ideas on your outline?
7. *Have you rewritten your paper?* Did you work to improve organization? Did you add transitions? Did you evaluate and improve paragraph construction? How about sentence structure? Read your paper aloud to me, and, as you do, let's list some ideas for rewriting.
8. *Have you done the final proofreading?* Let's do it together aloud. You read. Do you have any questions about punctuation? Did you refer to a usage handbook to help you correct errors? Are there any words which you think might be misspelled? Do you have a spelling dictionary? Are you satisfied with your word choice? Have you checked your bibliography page and footnotes for correct details and form? Have you rechecked the original assignment to make sure you have completed all parts of it?

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